

SUPPLEMENT.

The Mining Journal, RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

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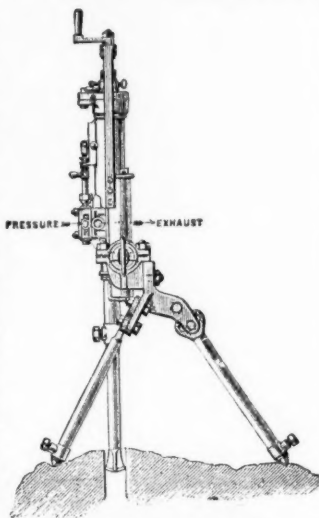
No. 2392.—VOL. LI.

LONDON, SATURDAY, JUNE 25, 1881.

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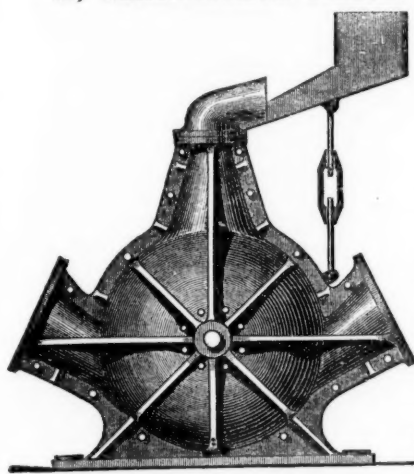
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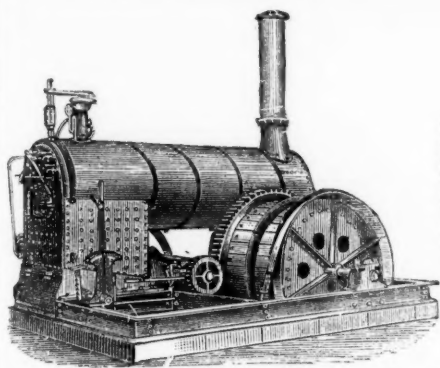
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[See Illustrated Advertisement every alternate week.]

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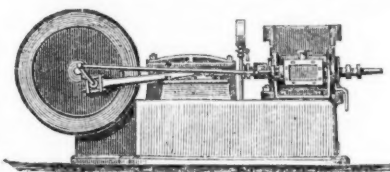
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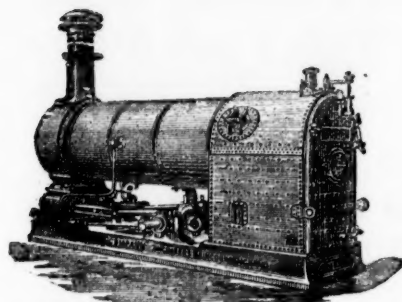
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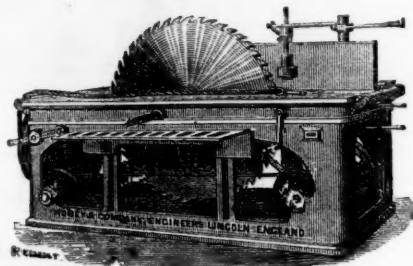
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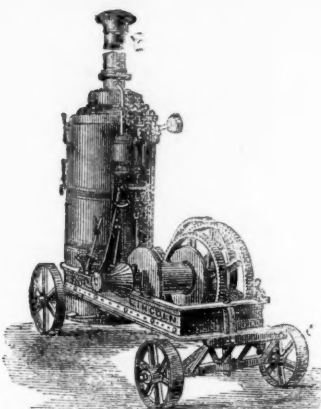
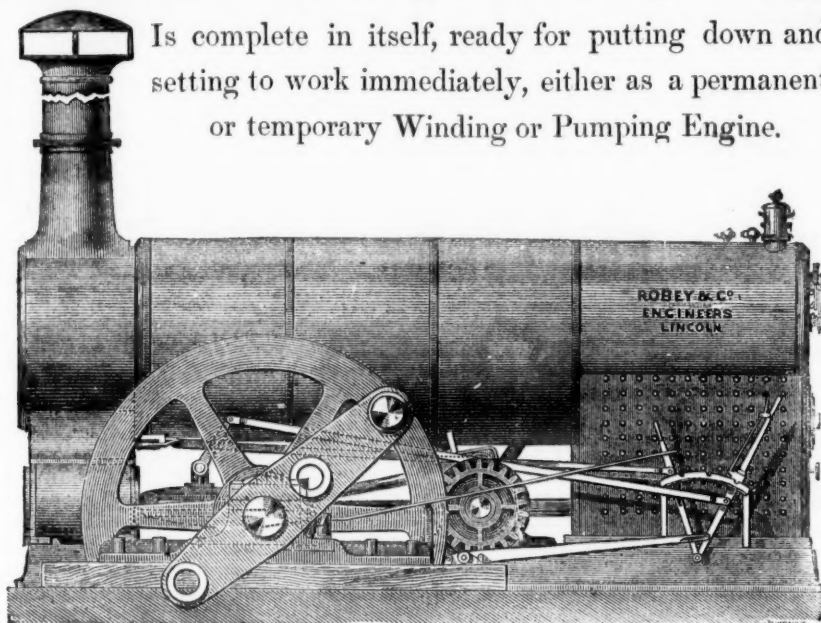
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 4 to 50-horse power.



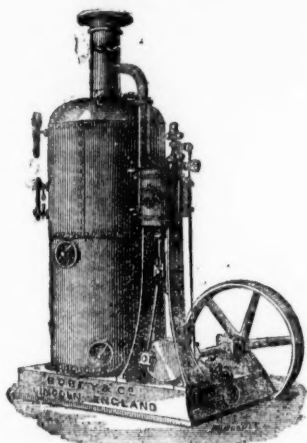
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The Patent "Robey" Mining Engine

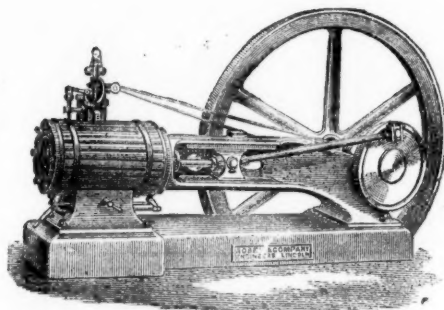
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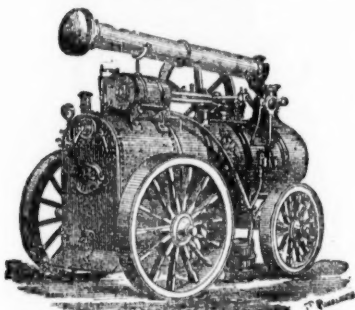
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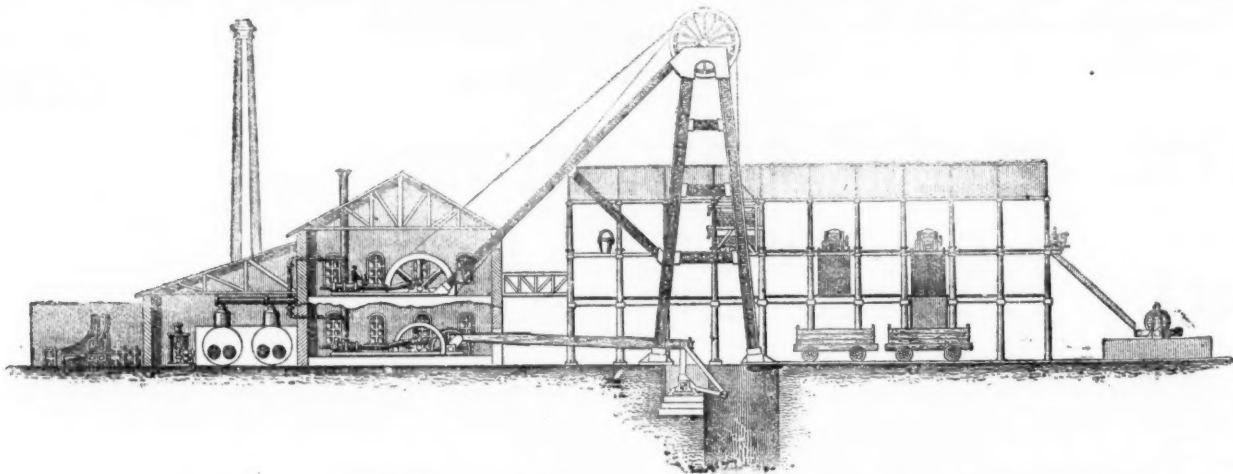
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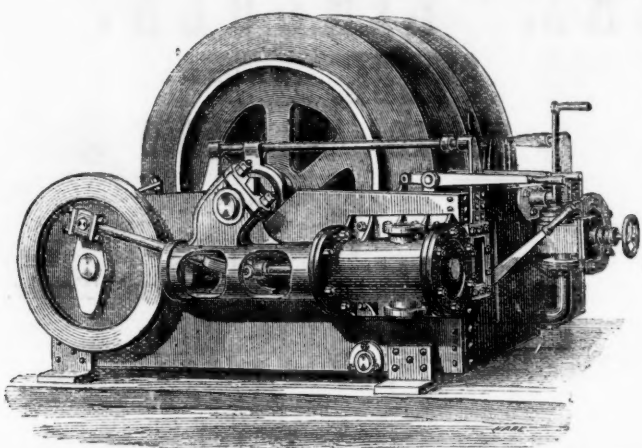
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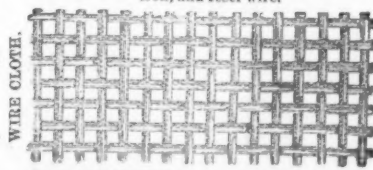
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Millimeter holes perforated in sheet-copper, brass, IRON, steel, and zinc.

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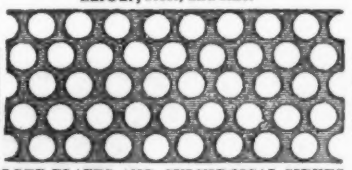
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In flat plates or shaped
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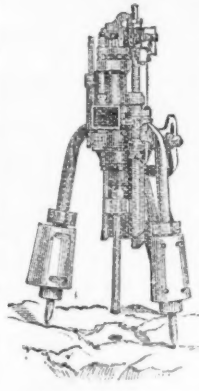
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The IRON AND COAL TRADES REVIEW is extensively circulated amongst the Iron Producers, Manufacturers, and Consumers, Coalowners, &c., in all the iron and coal districts. It is, therefore, one of the leading organs for advertising every description of Iron Manufactures, Machinery, New Inventions, and all matters relating to the Iron Coal, Hardware, Engineering, and Metal Trades in general. Offices of the Review: 7, Westminster Chambers, S.W.

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Also, NEW MAP OF LITTLE AND BIG COTTONWOOD MINING DISTRICTS showing the location of over Four Hundred Mines and Tunnel Sites, together with the Mines Surveyed for United States Patent. Price, sheets, 6s.; pocket form, 2s.

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PARIS, 1867.
BRONZE MEDAL, 1867.



ORDER OF THE CROWN OF PRUSSIA.



FALMOUTH, 1867.
SILVER MEDAL, 1867.

A DIPLOMA—HIGHEST OF ALL AWARDS—given by the Geographical Congress, Paris, 1875—M. Favre, Contractor, having exhibited the McKean Drill alone as the MODEL BORING MACHINE for the ST. GOTHARD TUNNEL.

SILVER MEDAL of the Highland and West of Scotland Agricultural Society, 1875—HIGHEST AWARD.

At the south end of the St. Gothard Tunnel, where

THE MCKEAN ROCK DRILLS

Are exclusively used, the advance made during eight consecutive weeks, ending February 7, was 24-90, 27-60, 24-80, 26-10, 28-30, 27-10, 28-40, 28-70 metres. Total advance of south heading during January was 121-30 metres, or 133 yards.

In a series of comparative trials made at the St. Gothard Tunnel, the McKean Rock Drill continued to work until the pressure was reduced to one-half atmosphere ($7\frac{1}{2}$ lbs.), showing almost the entire motive force to be available for the blow against the rock—a result of itself indicating many advantages.

The GREAT WESTERN RAILWAY has adopted these Machines for the SEVERN TUNNEL; the LONDON AND NORTH-WESTERN RAILWAY for the FESTINIOG TUNNEL; and the BRITISH GOVERNMENT for several Public Works. A considerable number of Mining Companies are now using them. Shafts and Galleries are driven at from three to six times the speed of hand labour, according to the size and number of machines employed, and with important saving in cost. The ratio of advantage over hand labour is greatest where the rock is hardest.

These Machines possess many advantages, which give them value unapproached by any other system of Boring Machine.

THE MCKEAN ROCK DRILL IS ATTAINING GENERAL USE THROUGHOUT THE WORLD FOR MINING, TUNNELLING, QUARRYING, AND SUB-MARINE BORING.

The MCKEAN ROCK DRILLS are the most powerful—the most portable—the most durable—the most compact—of the best mechanical device. They contain the fewest parts—have no weak parts—act without shock upon any of the operating parts—work with a lower pressure than any other Rock Drill—may be worked at a higher pressure than any other—may be run with safety to FIFTEEN HUNDRED STROKES PER MINUTE—do not require a mechanic to work them—are the smallest, shortest, and lightest of all machines—will give the longest feed without change of tool—work with long or short stroke at pleasure of operator.

The SAME Machine may be used for sinking, drifting, or open work. Their working parts are best protected against accidents. The various methods of mounting them are the most efficient.

N.B.—Correspondents should state particulars as to character of work in hand in writing us for information, on receipt of which a special definite answer, with reference to our full illustrated catalogue, will be sent.

PORTABLE BOILERS, AIR COMPRESSORS, BORING STEEL, IRON, AND FLEXIBLE TUBING.

The McKean Drill may be seen in operation daily in London.

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MANUFACTURED FOR MCKEAN AND CO. BY
MESSRS P. AND W. MACLELLAN, "CLUTHA IRONWORKS"
GLASGOW.



By a special method of preparation this leather is made solid, perfectly close in texture and impervious to water; it has, therefore, all the qualifications essential for pump buckets, and is the most durable material of which they can be made. It may be had of all dealers in leather, and of—

HEPBURN AND GALE,

TANNERS AND CURRIERS,

LEATHER MILL BAND AND HOSE PIPE MANUFACTURERS
LONG LANE, SOUTHWARK LONDON

Prize Medals, 1851, 1855, 13 for

MILL BANDS, HOSE, AND LEATHER FOR MACHINERY PURPOSES.

THE UNDERSIGNED, having secured the Grants of several VALUABLE MINERAL PROPERTIES (TIN AND COPPER), in the St. Blazey District, in the vicinity of Fowey Consols, &c., is DESIROUS OF OBTAINING THE CO-OPERATION OF CAPITALISTS for their EXPLORATION. There is little or no risk involved in the undertakings, and the capital required in each case is very limited. R. SYMONS

11, Parade, Truro, 3rd February, 1881.

MAP OF CALLINGTON, CALSTOCK, AND TAVISTOCK MINING DISTRICTS.

Proposed to be published by subscription, a MAP of the ABOVE DISTRICTS, showing the names and boundaries of all existing sets, lodes, cross-courses, and every other matter which such a map should contain. Persons disposed to patronise the publication—at One Guinea per copy—will please send their names as early as possible to me. R. SYMONS, Mineral Surveyor, Truro, February 3rd 1881.

TO PARENTS AND GUARDIANS.

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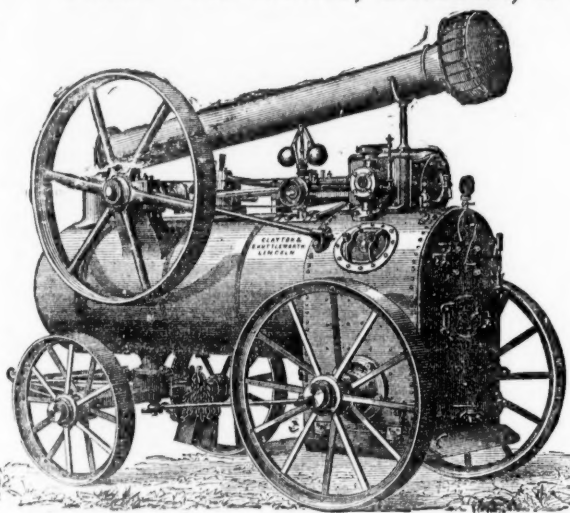
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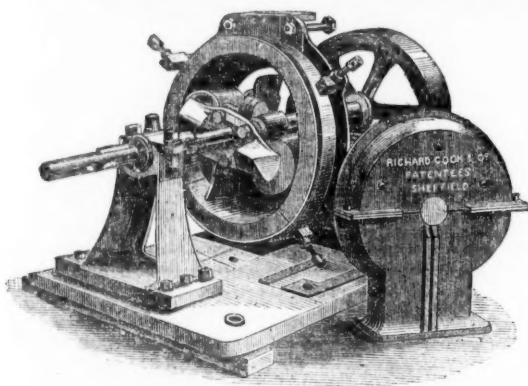
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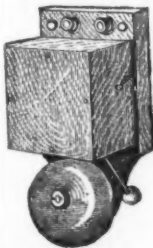
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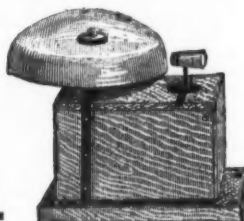
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JULIUS SAX (ESTD. 1850), 108, GREAT RUSSELL STREET, LONDON, W.C.



Original Correspondence.

QUICKSILVER.

SIR,—With a prospect of successful development of Indian gold mining far beyond the most sanguine expectation, this is a moment not inopportune to point out that the above is an article whose market value should at no distant date receive an immense impetus by reason of its absorption in the extraction of gold from the matrix of quartz. To place this beyond dispute, quotations from the Public Ledger for the last 10 years will doubtless possess value:—

	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.
Highest price	£7 15 0	8 15 0	7 5 0	9 10 0	11 11 0	11 11 0	11 11 0	11 11 0	11 11 0	11 11 0	11 11 0
Lowest price	6 7 6	5 17 6	6 7 6	7 2 6	7 17 6	7 17 6	7 17 6	7 17 6	7 17 6	7 17 6	7 17 6
Highest price	£22 0 0	26 0 0	20 0 0	13 0 0	12 0 0	12 0 0	12 0 0	12 0 0	12 0 0	12 0 0	12 0 0
Lowest price	9 10 0	18 10 0	12 10 0	10 0 0	9 15 0	9 15 0	9 15 0	9 15 0	9 15 0	9 15 0	9 15 0

The present price, 6s. 6d., apart from the Indian demand to be anticipated, would thus seem a perfectly safe trade investment, especially when the falling off in Californian production receives consideration, for instance the receipts at San Francisco for the 12 months ending May 31, 1881, were only 54,642 bottles against 66,522 and 68,615 to that date for the two previous years. It would also be as well to note the other chief source of output. Spanish is rather on the decrease, for the last four years the figures showing:—

	1880.	1879.	1878.	1877.
Bottles	47,153	52,512	43,200	47,949

These figures demonstrate an unmistakable diminution in the production, and when the fact is considered that already 38 companies are engaged in opening out the presumed "Ophir" of the ancients, I feel assured that long before the year closes facts will have borne out the calculations of—

INVESTIGATOR.

Roxford, June 21.

DIAMOND MINING IN SOUTH AFRICA—No. V.

SIR,—In one of my previous communications to you I said that the decision of the Cape Parliament to spend 5,000,000l. in the extension of railways would be of great advantage to diamond mining in South Africa. Since then a letter has appeared in a City article of one of the London daily papers, disputing the power of the Cape Government to raise such a sum for railway enterprise, or to pay the interest of such a sum if the Government should raise it. The letter bears the signature of "A Cape Merchant," but that that signature is bona fide I cannot bring my mind to believe. No Cape merchant of any standing but must approve the vote of the Parliament to extend the railway system to the diamond fields, and it will be of value to the European capitalist who has invested his money in diamond mining companies to have pointed out to him how largely the extension of railways to the fields will benefit the operations in the mines. In the first place I had better answer "A Cape Merchant," who has told the English capitalist that the colony has not the means for such stupendous work, and the best answer I can give him is to quote some figures which are indisputable.

Between two and three years since Mr. Sprigg, the Prime Minister of the Cape Colony, and Mr. Uppington, the Attorney-General, paid a visit to the diamond fields with a view to spy out the land for the purpose of making arrangements, if possible, to annex the province of Griqualand West to the Cape Colony. In the controversy which took place between the people of Kimberley and the two members of the Cape Government it became necessary that statistical information should be procured and brought to bear upon the subject under discussion. The people of Griqualand West, with a view to show that they could pay for their own Government and were able to make a railway for themselves if the Cape Government extended the colonial railway to the border of the colony, produced verified accounts of the amount paid by merchants in the diamond fields for the carriage of goods from the colony to the fields, and it amounted to one million and a half of money. This is over two years ago, and since that time much heavier machinery has been brought to bear on diamond mining operations, and therefore the amount paid for carriage from the colony must have largely increased, and as companies employing foreign capital go on importing more suitable machinery for the work the item of carriage will go on increasing.

Before, however, going further into that matter I had better give your readers some assurance that the Cape Colony can afford to spend 5,000,000l. which the Parliament has voted for railways, because unless it can the capitalists of Europe may not be so confident as they are at present that investments in the diamond mines of South Africa are safe and profitable. No man would like to invest his money in a colony that was going into undertakings beyond its means, and which would result in nothing but debt.

In the first place I have shown you that the Diamond Fields alone spend one and a half million pounds per annum in bringing goods up from the colonial ports to the fields. This has nothing to do with the passenger traffic, and the passenger traffic between the fields and the colonial towns and ports is very large, and largely increasing year by year. The sum which is now spent in goods and passenger traffic is certainly not less than 2,000,000l. per annum. Possibly we shall find the Cape merchant writing to his friend the City Editor asking how this 2,000,000l. per annum is to be paid. Well, in the first place there is at least 4,000,000l. of diamonds exported from the fields yearly, and then of the 883,362l. which is the value of ostrich feathers exported, a good share comes from and through Griqualand West, and that part of the colony does, in addition to its trade in diamonds and ostrich feathers, a large interior trade in ivory, karosses, and in skins, and such like, and that trade is going on increasing year by year. But it is not a question as to whether the Diamond Fields can pay the interest on the 5,000,000l. to be spent on railways, but whether the Cape can do so.

The Cape Colony includes Griqualand West, and the Cape Government carries out all its railways itself; and whatever the profit, it takes to itself, instead of allowing shareholders to take it. The 2,000,000l. of money spent in carriage by Griqualand West is an item to be calculated upon to cover the proposed outlay and cost of working the line. The Cape has already several lines at work; and, although they have been constructed for the most part but for comparatively a very short period, they give a return of 24.4s. per cent. on the capital invested, leaving 24.6s. per cent. to be contributed from the general revenue towards interest on capital raised for the construction of the opened section of railways.

But the trade of the colony and the wealth of the colony are so rapidly increasing that year by year the carrying work for railways will be so much increased that they will give large profits to the treasury. The ostrich feather trade has increased from 87,074l. in 1870 to 883,362l. in 1880. The exports have increased from 3,399,745l. in 1876 to 4,268,710l. in 1880. The increase in Customs' duties last year amounted to 74,607l., bringing the total up to 1,032,836l.

That the colony can afford to pay the proposed amount for railways there can be no question to anyone familiar with its growing trade and wealth. Now, how will this railway affect diamond mining? In the first place, the mines are from 600 to 700 miles from the seaports, and at present the goods are conveyed upon ox wagons, taking weeks in transition. Every bit of machinery, corrugated iron, wood, and articles of consumption brought from the colony depends upon the ox wagon, and sometimes for weeks—aye, I have known it months—goods remain at the ports and cannot be brought up to the fields, whence they are needed, because the season is not favourable for oxen to travel. All this is a serious hindrance to mining operations, and besides which I presume we may take it that cost of carriage will be somewhat reduced; but if it is not then the regularity of getting up goods, and the speed by which they will be brought up from the ports, will be an immense saving of time, which will be a saving of money.

The next thing which I have to bring to the notice of the investor to show how much better and more profitable diamond mining is to be carried on in future is that the cost of water for "washing out" is to be reduced and the supply made equal to the demand. Hitherto the difficulty of obtaining water in sufficient quantities for mining purposes has been at certain seasons of the year very great indeed, and many and many a time in my experience have the diggers been standing still (and with their thousands of native labourers in full pay) for months for want of water. Many a large digger pays 100l. per week for water, for the quantity required

first to soften "the blue" and then for the rotary machines is enormous. The price of water may be quoted at on an average 2s. 6d. per 100 gallons. It is sometimes 5s. per 100 gallons, and I have known it as high as 7s. 6d. per 100 gallons.

The Kimberley Waterworks Company are now about to bring in a supply from the Vaal River, and have agreed to supply it at 1s. per 100 gallons. This will be immensely profitable to the company, and give its shareholders dividends equal to diamond mining, whilst it will save the diamond miner 1s. 6d. per 100 gallons all the year round, and sometimes 2s. 6d. per 100 gallons, and prevent diamond mining from being ever brought to a standstill for want of water. A claimholder pays hundreds of pounds in wages per week, and to have machinery and stuff standing still for even one week for want of water, or waiting for machinery through lack of carriage, is an awful expense.

R. W. MURRAY.

South African Office, Upper Thames-street.

BRITISH MINING MACHINERY IN INDIA.

SIR,—In the Mining Journal of April 30 we note a communication, signed "Argus." In this it is stated that we made the 12-stamp head battery, recently erected and worked at the Ooregum Gold Mines, which is said to have broken down from the construction being of the rudest kind. This statement is incorrect—we did not make any portions of the battery nor machinery at the workings opened by Mr. Bray. We have manufactured pumps and gearing designed by Mr. Bray, which are now being erected at the shaft termed Munday's, and supplied engine-power from Messrs. Ramsomes, Head, and Jefferies to drive the same. MASSEY AND CO.

Napier Works, Madras, May 28.

INDIAN GOLD MINES—LARGE YIELD OF GOLD.

SIR,—On perusing the report of the proceedings of a meeting of the Indian Gold Mines Company of Glasgow, published in last week's Journal, I observe that the Chairman, Sir William Cunningham, was unable to inform the shareholders of the name of the reef whence the stone was obtained yielding 4 ozs. per ton; permit me then to state, for the information both of Sir William and shareholders generally, that the reef in question belongs to the South India Alpha Gold Mining Company, and work has been commenced by Mr. Severn at a portion of the reef named Wright's Level, where very good stone is got quite close to the surface. The Indian Gold Mines Company are working this portion of the Alpha property under the conditions recently made public through the columns of the Journal, and as a shareholder in the Alpha Company I may say that I and others are not a little surprised at no mention having yet been made by the Indian Gold Mines Company of this important fact.

Brighton, June 23.

J. H. GAITSKELL.

CEDAR CREEK GOLD MINES COMPANY.

SIR,—I am pleased to hear that a scheme is under consideration for the re-working of the Cedar Creek Gold Mines in California. When I see so many new gold companies brought out every month, and the capital in most instances so readily subscribed, I am at a loss to solve the question why such a good property as the Cedar Creek Mines has been allowed to remain idle so many months. Ask any mining authority from the Pacific States what he thinks of these mines, and his answer is safe to be that they are considered to be among the best in California.

When the scheme of re-construction is laid before the shareholders—and I hear it will not be long before something of this sort will be done—I hope they will come forward readily and subscribe the few thousand pounds needed to resume work. Then we shall see Cedar Creek shares, which are worth now only about 4s., go to a respectable price.—June 22.

A SHAREHOLDER.

REMARKS ON MINES AND MINING IN COLORADO.

SIR,—Since my arrival in this country I have been rather surprised at the enormous amount of undeveloped mineral wealth which lies scattered over this vast Continent, more especially in Colorado, where rich lodes of lead, copper, silver, gold, and in fact mostly all the known valuable minerals, can be easily traced for miles cropping out at the surface or found in the alluvial deposits of rivers or lakes. The enormous amount of capital which is necessary to start a mining concern in the British Isles, more especially Cornwall or Wales, is scarcely ever required in this country, the principal mines are situated generally on the mountain slopes, thereby in a manner obviating the necessity of erecting pumping and other expensive machinery, &c., to place a mine in proper working order; and then it is a question if the mine turns out sufficient returns to pay the cost of a single inspection. All this expense is done away with here, simply because the ground can be easily tested as to its value at a paying cost. I wish more especially to call the attention of mining speculators in the British Isles to the Livingstone Mine, which is situated at an altitude of about 8000 ft. above the level of the sea (though situated at the base of a high mountain) between the celebrated Boulder Canon and Left Hand Creek, in the county of Boulder, State of Colorado, and I can safely say without fear of contradiction that there is no mine in the British Isles that can offer the same advantages which the Livingstone mines affords. The mine proper extends from south-east to north-east; the extent of the sett is 1500 by 150 ft., which I suppose will look very small in the eyes of mining adventurers in the Old Country, but which I can assure you is considered rather a big thing here. There are two other mining claims or lodes running parallel with it, named respectively the Armstrong and Larato lodes, which can be incorporated in the Livingstone sett.

The mine was first discovered by a miner, J. P. Jones, on March 10, 1879. Indications proved that the stratification was highly mineralised, producing a free milling ore of a telluride character, carrying gold and silver in large quantities, and pronounced by competent experts who have inspected the property to be of great value. Five samples have been assayed giving the following results:—

	Gold.	Silver.	Value per ton.
No. 1.	8 ozs.	15 ozs.	£44 0 0
No. 2.	57 "	14 "	388 14 6
No. 3.	118 "	40 "	601 3 4
No. 4.	67 "	21 "	342 2 6
No. 5.	1 "	3/10 "	5 2 6

Though I give the result of a special assay, I would strongly advise gentlemen embarking in mining enterprises, more especially American, to place more credence on the results of milling operations, simply for this reason that an assay is a test from a selected piece of ore, whilst the week's run from a mill will be a good average of the paying mineral in its various grades.

The vein has been costained on the surface both north and south of the shaft, which was sunk to the depth of 15 fms., with a view of locating it as a permanent working shaft. The said surface workings uncover the vein 150 ft. north of the shaft, 70 ft. wide, at an average depth of 10 ft. In the space opened south of the shaft several leaders and two caunters were found, one of the latter crossing the Livingstone vein about 70 ft. south of the present shaft at an angle of about 35° at the point of intersection. A pocket of very rich ore was found; in the open-cut north of the shaft a large body of ore, at least 12 ft. in width, was discovered, out of which the mill gave returns of over 300l. per ton. In addition to the better class of milling ores a great quantity of concentrating ore was found—in fact, the whole crevice matter is concentrating, the bulk of it being low grade, interspersed with streaks of very rich ore. The geological formation of the district is granite, with limestone as a base, intersected with a large outcrop of white spar or virgin quartz. The crevice matter is decomposed granite and quartz, carrying rusty free gold and silver, with a little, if any, iron or copper. As the shaft went down tellurium and sylvanite were met with, though only in sufficient quantity to indicate its presence as yet is found. The vein is an unusually large one. At the bottom of the shaft a cross-cut has been driven for the purpose of intersecting the vein, but in consequence of the broken state of the ground I should like to see the shaft sunk to at least 5 fms. more for the purpose of getting into more settled ground; if such is done I have no hesitation in saying it will be the means of developing immense mineral wealth. There is now on the surface about 300 tons of good concentrating work, which will average 10l. per ton.

A splendid cartroad runs through the sett to the smelting works.

which lie within a few miles of the mine. Though the principal advantage is the railway and metal market, which is only ten miles distant at a down grade from the scene of operations, any quantity of timber can be had for mining purposes for the mere trouble of cutting. No lack of water power all the year round. The plant consists of a good substantial shaft house, 10 by 15, a strong ore house, 18 by 20, blacksmith's shop, stable, store house, and superintendent's offices; these are all built of good substantial sawn lumber.

In connection with this article I will incidentally mention the fact that there are parties who are making arrangements to erect works for an improved process for the treatment of telluride ores, which, if successful, will revolutionise the expensive manner heretofore used in the treatment of our ores, and enhance the value of the Livingstone property a thousandfold.

In a few weeks I will send you the next paper.

Chicago, June 7.

J. PENROSE, Mining Engineer.

EUREKA (NEVADA) MINING DISTRICT.

SIR,—I have the pleasure to hand you my usual budget of news from this locality:—

A few days since a Sentinel reporter, in company with E. J. Butler, the secretary, and Maurice Hartnett, the contractor, visited the Eureka Tunnel. Although this work has been in progress for upwards of two years, we were unprepared to see so large an amount of labour performed. Our citizens are fully aware that this enterprise has been steadily progressing, but few have any conception of its vastness or the benefits which must accrue to our district. A brief outline of what we saw may be of interest to our readers, and stimulate all who have mining interests in the district to bend themselves to renewed exertions in developing their properties.

The Eureka Tunnel is situated upon the eastern slope of Prospect Mountain at the head of Goodwin Canyon, and in the vicinity of many mines which have produced largely in the past, although no great depth has been reached by any of them. Among these may be enumerated the Industry, Plute, Alexandria, Pioneer, El Dorado, Silver Connor, and others, which we do not now recall. All of these and others in the vicinity may eventually be worked by means of the tunnel, as this system of mining is the least expensive whenever it can be successfully accomplished.

Upon entering the tunnel lime rock is encountered which is about 200 ft. wide, when a belt of shale is met, which is about 250 ft. in width. Then another lime body puts in an appearance, and continues for several hundred feet. At 900 ft. from the opening a small seam of iron ore was crossed, and a drift started north upon it. From this drift an upraise was made, the ore being followed north about 70 ft., through another drift. The ore appearing to trend downward, another lateral drift was run from the tunnel level for a distance of 75 ft., encountering a seam of ore about 2 ft. wide, which appears to extend north and downward.

Owing to the air becoming foul at this point work was suspended upon the drift, as it interfered with the work in the breast, the management wishing to push the tunnel ahead rapidly to reach the contact. At a point about 1100 ft. from the mouth a splendid vein is encountered, fully 6 ft. in width, the ore showing by assay to be of a grade which will pay whenever the company may be able to work it. At a point about 50 ft. west from this ledge an ore was met with lying horizontal, varying in width from 2 in. to 2 ft., and much resembling manganese, although the miners insist that it is ore. This assay as high as \$1000 per ton, a streak of yellow chloride running through it, and appearing to permeate the whole rock. This seems to puzzle not only the miner, but also the geologists and experts who have seen it in place in the tunnel. Another belt of shale is soon encountered, which has been penetrated over 500 ft., but as water has recently been met it is believed the contact or mineral zone is being approached. In the belt of shale here mentioned mineralised lime appears, which has forced its way into the shale as the shale has folded itself over it.

In the mines of Ruby Hill the indications presented at this point in the tunnel are followed, and are invariably found in connection with it. There are in fact a number of places in the line of the work which no doubt the company will eventually work upon, and in doing so develop ore in paying quantities.

The length of the tunnel is now 1800 feet with a vertical depth of 1000 ft. This great enterprise was inaugurated by General P. E. Connor, who is proving his faith in its success by bearing the largest share of its cost. The immense benefit to accrue to Eureka district by this work can hardly be overestimated. It will demonstrate the value of the great mineral belt passing northerly and southerly through the district to a greater depth than has yet been reached by any other means.

The Dug Out Mine, situated on the western slope of Prospect Mountain, and owned by Mike Louvay, was yesterday bonded to Messrs. Billings and Sprigg, Eastern capitalists, for the sum of \$50,000. This property has had a splendid reputation for a long time, and we are pleased to know that it has fallen into the hands of parties who are abundantly able to develop it.

If capitalists will insist on coming here and spending their money, we may possibly have a boom before the summer is over.

London, June 23.

RUBY HILL.

FRONTINO AND BOLIVIA MINING COMPANY.

SIR,—A few months since one of your correspondents wrote you as to the comparative merits of this mine and the Indian gold mines. If the Indian mines do not do more for their shareholders it will be a bad case for the latter. The Frontino Mine has been in operation about 20 years, and as yet has done little for its unfortunate owners; in fact, it has only paid in the aggregate 8s. in dividends, and it may fairly be ranked among the failures up to the present. No doubt the Indian mines will prove altogether superior as a rule. The Chairman of the Frontino and Bolivia Mine, at the meeting last December, drew on the imagination of the shareholders by pictures of handsome quarterly dividends; and in the report issued on the 1st of the following month splendid remittances were indicated.

Is it likely that these statements could be made without reasonable foundation? One is loth to believe they could, yet the result testifies to the contrary, as the remittances have been miserably poor, and have grown less month by month, and culminated in 1077! It is needless to say that there was no dividend for the first quarter; the second is nearly over, and I fear will be much worse than its predecessor. The first excuse made was the mines were short of powder. Is it to be supposed this can be accepted from the management of a property representing nominally 130,000l.? Sure half a ton of powder is never to seek for—the excuse is a very lame one. Since then "dry season, dry season" everlastingly; and we cannot disprove it, the property being on the other side of the world, in a country with which we have scarcely any communication. We only know what the superintendent and agent tell us.

The management of the mines seems to be too much occupied with agriculture, and in writing lengthened dissertations upon the same, instead of getting machinery together for the extraction of the gold. To say the least, the reports of the mine superintendents and agent, if not seriously overdrawn, have been altogether too sanguine. It would have been better to have announced last year, when it was decided to try to utilise the Pocone water, to have at once informed the shareholders the river was 11½ miles from the mines. Considering it is to be conveyed all these miles in a ditch 3½ ft. wide, and only about half as deep, it is not unlikely to disappear in the subsoil before reaching a quarter of the distance; in fact, it can be no great surprise if it never reaches the mines, or if it is only landed after years of expense, and the volume then so small as to be practically useless. I would just say a word about the expenses. For the six months ending March last, as compared with the corresponding months in 1879 and 1880, the working expenses were increased by 7600l., while the profits were only increased 108l. The mines seem barely able to support themselves the greater part of the year. The results of operating them hitherto, to say the least, have been very unsatisfactory.

A SHAREHOLDER.

BRAZILIAN GOLD MINES.

SIR,—The subjoined documents were, as anticipated in my letter published in last week's Journal, received by the company on June 18, and their contents are viewed in a very favourable light by the practical directors. I think the reports will go far to dispel the pessimist views entertained by your Minas Geraes correspondent contained in his statement which appeared in the Mining Journal of June 11.

G. C. HARVEY, Secretary.

Palmerston Buildings, June 21.

Canthé, Brazil, May 1.—Servilio Velho Mine: Harvey's level, 250 ft., drifted 45 ft. On the west side of the drift is a large quartz lode; we expect to cut into the main Disoberto lode within the distance mentioned in former letters, namely 100 ft.—Mata Mata Mine: The north drift continues its improved appearance. The south drift passed through a line showing a fine sample of gold, and is now in a stronger lode than I have seen in this section of the mine. Wilson's cross-cut drifted 38 ft., crossing branches of hard rock containing mudi; this lode we can trace in the adjoining ravine south.—Jacotinga: We have suspended the north-east drift and commenced a cross-cut for ventilation; we shall resume drifting on the lines showing gold shortly. The season is favourable for surface work. Contracts are being arranged for work necessary for the future development of the mine.—F. GEACH.

Disoberto, May 1.—Report of Mining Captain for April: At Serviço Velho we have driven 45 ft. accompanying a cross-course which showed gold, and is improving as we get nearer the mine lode running through Disoberto; this we are saving for the stamps. At Mata Mata we have driven south 32 ft. on the course of the lode; for part of driving we have had some rich samples. North driven 10 ft.; the end is very much improved in appearance; this also we are saving for the stamps. At the deep shaft we have driven 25 ft. to reach the Mata Mata lode, and have got a fine showing gold, with a large quantity

of munda; in this level we are preparing to lay down a tramroad. In the jactings we have driven 60 ft., and have crossed two lines showing gold; this end is suspended, and we are now driving east on a course showing gold, where No. 2 shaft was taken from and sent to London; this we purpose to communicate to the level driven north-east, and when holed will give air to drive on the courses seen in that level.—JOHN TURBAN.

Cietho, Brazil, May 12.—I had this pleasure on April 22, since which I have received your esteemed favour of March 23, and await your further commands and enquiries relating to my detailed report. I desire now to inform you of our progress for the past three months.—Service Velho Mine: Harvey's level 250 ft. is advancing fairly, the large quartz lode we tried to avoid in drifting came in on the west side for 2 ft. in width, and is being carried with the level; a branch lode also 2 ft. wide has been running with the course of the lode towards the main Descoberto lode, and producing gold in the samples. We are saving all for further treatment. All shallow works in this section await the deeper drifts.—Mata Mata Mine: The north and south drifts are improved in width; the more we see of these levels confirm us that depth is necessary to a uniform lode. Wilson's drift is in a good position for future work on this lode.—Jacotinga: Two levels are nearly complete; we propose to follow every line showing gold in the samples.—Surface: Five or six pairs of sawyers are well supplied with timber from the estate at the price of falling and carriage.—Forest Work: The season is favourable for cutting timber for planing and underground requirements, contracts for tile, grass for roofing purposes, carriage of timber and charcoal, in fact we are contracting for every description of work practicable to the Brazilian. The blacksmith's shop is complete, and the water blast at work; carpenter's shop awaiting tile. Patterns for ironwork used in making train wagons ready, and wagons being built. The water supply to work the mines is being measured. The mine is sampled at all hours, and all extra costs in labour avoided. The Englishmen's dwelling houses will shortly have my attention. The materials supplied from Hayle have arrived; a portion supplied from Tangye Brothers has also arrived, omitted to be shipped on your side as per particulars enclosed, and not in B.L. with me, and wanted for Englishmen's houses. I enclose duplicate letters from Messrs. Johnson and Co. for your information. The drafts drawn to date amount to \$7000—March 1, \$300; April 1, \$1000; April 19, \$1400; May 1, \$1600—total as above, \$3700. I returned to Mr. Lott the account of the money I drew at Rio to pay expenses out country of self and staff.—Samples: Having addressed you on these in previous letters, I do not see the necessity of your spending any money in assays; if you desire I will forward a duplicate set of those tested by our process. I find it very cold temperature, falling at night below 60.—F. GEACH.

GOLD MINING—NEW SOUTH WALES.

SIR,—I see by the English papers that there is not only a desire to invest in the East Indian Gold Mines, but also in the Australian ones; and, as any double dealing can more easily be found out here than in India, so much the better for home investors in our mines, to whom these few words of warning also may be useful. Do not be carried away by reports as to assays (for free gold), for 50 ozs. to the ton by assay may not yield practically more than an ounce or even a fraction of an ounce per ton (with pyrites, of course, it is difficult to a great extent), as by proper treatment all the gold should be got out of this within 5 or 6 per cent.

The only real payable test is the result through the stamper boxes and tables, and if the reef is 3 ft. wide, and will yield only 10 dwts. steadily, it will pay well if wood and water are plentiful, and country fairly easy to work.

Before erecting expensive plant insist on a few hundred tons of stone being first raised. This will prove the reef; cost comparatively little, and if it will not pay the first loss is comparatively small. Under no circumstances accept any report unless it be from the Government Mining Department (with its stamp attached), or else from some well-known scientific man of high character and real experience, or whom some first-class respectable firm can vouch for. I mention this specially, because there are schemes being got up here to send to London, some of which are about as likely to pay as if they were in the moon; and, as some of the men who write the reports have neither character nor means beyond what the promotion will find for them the English public cannot be too careful in seeing that whatever property they do invest in has been actually seen and examined by men of position and proper scientific acquirements.

There is a steady revival here at last, and the striking of the wonderfully rich leads again in the Lucknow Reefs—some blocks I saw from the Reform Company's Claim will certainly go well for 10000 ozs. per ton—and the way in which one of the line of reefs at Copeland (Prince Charlie) has lately opened out is inducing confidence again. Before these late special finds—say, even six months ago—either of these properties could probably have been got for 20,000Z., and now I expect they would want a little more, especially as the Old Lucknow, at Wentworth, has already given about 6 tons of gold; and a scientific gentleman from Home, on fully examining the Copeland line of reef, valued the gold which might reasonably be expected to be got from it at from half a million to over three-quarters sterling. Temora is also proving extremely rich in alluvial gold; easy sinking, great thickness of wash-dirt, and plenty of coarse gold and nuggets sprinkled through it all; and if the water supply were only equal to the demand it would probably prove itself one of the richest alluvial fields yet found here. At Zalival in the south, Solferino in the north, and Mount Poole in the extreme west fresh finds are being made; and Araluen and many other old fields are steadily improving again—so that, generally speaking, there is now a more stable, because more fully proved, opening for investment than ever, and certainly a more reliable one than Eastern India can show; only, as I said before, let no penny of English capital be sent out here for this purpose except on the faith of reports from an undoubtedly reliable source, as without the fullest precaution some plausible swindle will succeed (so far as floating is concerned), and England will lose her money and the mines of New South Wales their character.

MANGANESE.—There has been a large deposit of this ore lately found here, assaying over 70 per cent., and singularly free from phosphorus, silver, sulphur, &c.; but, as no reliable quotation of value in London can be got here, it lies idle. CHROME.—Large deposits of this also (one assaying 75 per cent.) have lately been opened up, but also lie idle from like cause. CARBONATE OF MAGNESE.—Mr. Constable here has received some samples of this from a deposit lately discovered on his land in New Caledonia; it is also very pure, and (it is said) can be got out in quantity should there be any demand for it. SULPHUR.—White Island, near Auckland, New Zealand, has just been visited by Mr. McIver, from Melbourne, who reports the sulphur deposits as being very extensive—and, in fact, all but inexhaustible, as they are continually forming. R. D. ADAMS.

Sydney, May.

GOLD MINING IN QUEENSLAND.

SIR,—The accompanying letter on the Gypmie Gold Field has been sent me by Mr. N. Bartley, of Brisbane, Queensland, and as he is a gentleman reputed to be well acquainted with the subject, and as attention is being attracted towards Queensland generally as a field for investment of home capital it struck me it might interest some of the numerous readers of the *Mining Journal*.

Probably no known gold field has ever given such average high yields of gold per ton as Gypmie has and is again now doing for the sudden revival of the last six months there all along the various lines of reefs is something extraordinary, and goes very strongly to prove the permanency of the rich levels with depth, as many claims that were considered worked out at the 200 ft. levels on being again sunk on prove as rich or richer than ever, and in many cases within a few feet of where the former owners left off; and, although in Sydney men naturally like to see outside capital floating into our own colony for its fuller development, still in common justice I am forced to say that either Gypmie or Charter's Towers—but more especially Gypmie—offer one of the most certain fields for investment in the colonies for gold mining, and more especially to any company with the enterprise and sufficient capital to sink 700 or 800 ft., and properly cross-cut and fully explore the lodes, &c. R. D. ADAMS.

The GYPMIE GOLD FIELD, situated on the head of the Mary River, in Southern Queensland, is, for its size, the best gold field in the world. Towards the close of the year 1867 about 17,000Z. worth of alluvial gold was found in a gully running down to the river, and this was the first and the last of the alluvial metal unearthed at this spot; reefs were discovered, and all the reefs in this quartz reef. A reef is a wall generally of white quartz, averaging about 18 in. in width, and penetrating the earth at an angle of about 70°, which is called the underlie. The geological formation of Gypmie gold field is a green diorite—the miners call it slate, but there is nothing schistose about it—and wherever the quartz reefs traverse this rock they are richly impregnated with gold. The same reefs, however, which continue to run outside of the boundaries of the diorite area contain no gold whatever when they are clear of that formation. The claims of Gypmie to consideration are founded on many solid bases: in the first place, its average yield since its discovery in 1867 has been about 2 ozs. of gold to the ton of quartz. Let anyone compare the average of Victoria, New South Wales, California, Mexico, Brazil, the Ural, &c., and the result will be startling; and it must be borne in mind that this high yield average of Gypmie is sustained nearly all through the great colony of Queensland, which, with an area three

times that of Texas, and more than double that of France, having only a fourth of the population of New South Wales, produces annually more than three times the yearly yield of gold of that parent colony. In Victoria the alluvial gold is or has been so rich and plentiful that the reefs—the original source of it—having parted with most of their wealth, are impoverished so as to average only about 8 dwts. of gold to the ton in place of 40 dwts. as in Queensland, where alluvial gold is much more rarely found than in the southern part of Australia. To Gypmie also belongs the honour of having yielded the largest return of gold from a single ton of quartz that the annals of the world record: 4000 ozs. of refined gold were crushed from 1 ton of quartz taken out of Lady Mary (prospectors) Claim in 1867. The gold, like small reefs pulled lengthways, held the quartz together, and the heavy steel stampers were powerless on this small parcel of ductile metal, and it was not till some 4 or 5 tons of barren quartz were added to the mill that the rich sample could be reduced to a powder fit to amalgamate with quicksilver. This yield from a single ton has never since been quite equalled, even on Gypmie; but many a single shaft there of no great depth or on the abandoned work of a ton of quartz taken out of Lady Mary (prospectors) Claim in 1867. The gold, like small reefs pulled lengthways, held the quartz together, and the heavy steel stampers were powerless on this small parcel of ductile metal, and it was not till some 4 or 5 tons of barren quartz were added to the mill that the rich sample could be reduced to a powder fit to amalgamate with quicksilver. 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course is generally towards the north-west. The river, therefore, runs diagonally along this strata; but in some places it takes sharp bends from east to west, thus crossing the strata. One of these bends is known by the name of the Remollo; this is situated about a mile towards the south of San Emiliano. The bed of the river here consists of unevenly denuded ridges, running through its whole width, and rising abruptly on either side. The dip of these ridges is about 50° out of the perpendicular; the spaces between them are filled with a whitey yellow clay, impregnated with gold. It was out of one of these spaces that my companion took the 4½ ozs. of gold. The whole of this district has now been registered, and washing will shortly commence; the results will be reported by me.

There can be no reasonable doubt that reefs exist in the district. Those who have time and money at their disposal turn their attention elsewhere, probably because of the hardships to be encountered in ramblings amongst these mountains, but they certainly leave untrodden districts of untold wealth as that they leave unseen some of the grandest and most beautiful of nature's pictures. Crossing the Navia and going westwards through mountain gorges, whose sides to the summits are covered with oak and chestnut trees, we reached San Martin de Oseos. Here there are several galena and blende mines located, with lodes of from 6 in. to 5 ft. The difficulty that has always been encountered in the working of these is the absence of good roads for transport. Here there is a small smelting works with machinery for all purposes; this is owned by a French company. The director informed me that he had to bring up his fuel (coke) from Vega de Rivadeo, the nearest shipping port, but distant some nine miles. There appeared to be but little animation in working the mines adjoining those of this company.

We left the director of this works with our best wishes for his success, and proceeded on to Vega de Rivadeo. Near to this place we met with several deposits of iron ore. We secured samples from one of them, and on assay I found it yielded 68.5 per cent.

This has only just been opened up. From its appearance, I judge that it will not be found in large quantities. It is within two kilometres of the mole of Vega de Rivadeo, where there is, at high water, some 12 to 14 ft. A fairly good cart road runs down from the deposit to the mole. Near the port there is an extensive bed of kaolin, which has been taken up by a parish priest, who will probably have read, since he has applied, the fable of the "dog in the manger." I have omitted noting the copper ore and pyrites deposits of Busdemouros, some six miles from this port. These will be noted in another letter, since, having again reached a fairly clean hotel, we cannot forego the pleasure of indulging in a rest for a short time.

Gijón.

J. A. JONES.

THE CAPE COPPER COMPANY.

SIR,—The report of this company shows again splendid results, and enables me to forecast future dividends. We find that there is a sum carried over to next year of 31,000*l.* Now, taking the extraction from the mines to be only the same and the price the same, the profits for 1881 must be 111,000*l.* = 142,000*l.* Dealing in the same way with this sum the directors, after paying some dividends only of 80,000*l.*, will then have in hand a surplus of 62,000*l.*, a sum which certainly will warrant them paying enhanced dividends.

The smelting will also most certainly give an additional profit for the current year now that new furnaces are being constructed. The Cape is not a gold mine, but the directors have a way of turning the copper into gold with admirable skill and punctuality; and this property appears to me to be, at any rate, the champion mine on the London Stock Exchange, though, perhaps, not on that of San Francisco.—June 23. SHAREHOLDER.

LEAD REPORT.

SIR,—Since our last the market has turned much weaker, and to effect sales a reduction in favour of the buyer has to be given. The following sales were effected:—300 tons rich Spanish lead, 14*l.* 12s. 6d.; 270 tons rich Spanish lead, 14*l.* 12s. 6d.; 60 tons ordinary Spanish lead, 14*l.* 10s.; 200 tons ordinary Spanish lead, 14*l.* 5s. The quantity offered and on the way is rather larger, and includes 600 tons of Greek; and this and the near approach of end of the half-year induces all buyers to hold their orders back. STOCKS.

Newcastle-on-Tyne, June 23.

GUNNISLAKE (CLITTERS) MINE.

SIR,—I think the adventurers in this mine are indebted to "A Shareholder" for his letter, which has evoked a reply from Mr. R. C. Secombe, entirely corroborating his opinion, and, I believe, the opinion of all who really understand the working of this mine. Mr. R. C. Secombe says:—"Doubtless the question of a new shaft and larger water supply should receive early attention." Further he says—"The adoption of some method for letting workmen into and raising them from the mine is of paramount importance, and should receive immediate attention: 400 per cent. per annum would be saved on an outlay of 150*l.*" He also admits that in the event of putting through a new shaft boring machinery would be required. These are straightforward replies to the questions of "A Shareholder," and we are much obliged to Mr. Secombe for them. The information comes with great weight from Mr. Secombe, as he understands the property thoroughly, and is a man of high character for integrity and intelligence. Now comes the question of ways and means. These necessary improvements will necessitate the expenditure of a large sum of money, which cannot be raised among the shareholders, many of whom are not willing to pay calls. In short, the mine is being starved for want of support. There is not a finer copper mine in Devon or Cornwall, with ten lodes of copper, which realise 6*l.* per ton in the market, only one of the lodes being worked, and yet it is only just paying its way, and cannot in reality afford the 1*l.* per share dividend which some of the shareholders were determined to have at the last two meetings, against the better judgment of others, who were willing to pay a call. There is evidently no escape from this dilemma, except by raising money in some way to carry out the improvements which are necessary for the development of this valuable property.

The simplest method, and the one most in accordance with the spirit of the times, would be to convert the concern into a Limited Liability company, to subdivide the shares, and dispose of the 400 forfeited shares. We cannot blink the fact that the days of the Cost-book are numbered. The public are not satisfied without knowing the extent of their liability. The avidity with which Limited Liability companies are caught up in the present day proves this.

—ANOTHER SHAREHOLDER.

ONSLOW CONSOLS.

SIR,—The points raised respecting this property in the letter upon North Cornwall Mining Enterprise in the Supplement to last week's Journal are a reason for my asking permission to again encroach upon your space. I am not a practical miner, nor do I pretend to any great knowledge of this interesting subject, but when I ventured to differ from your correspondent as to the mine being worked in a wrong way I had in view the report of Capt. George Rickard, who was agent at this mine at the time of its ceasing to be worked, which appeared in the *Mining Journal* about 1863. He states "the shaft is down 50 fms. below the depth that an adit if brought home would cut the shaft," and he approves of further sinking for the great body of ore. I find also in the *Journal* of Oct. 3, 1863, page 699, a letter signed "Tributer," in which also it is stated that "the mine is only about 50 fms. deep below the surface of the river." I never pretended that any regard was had for economy, for the agents in the earlier stages seem to me to have acted as if there was plenty of money to be spent, and their business was to spend it. Still, looking at facts as they stand, the two shafts 122 fms. and 80 fms. deep sunk in such a substantial and permanent manner must be of great value to the property for hauling up the lodestuff at a point from which the transit to the railway will be easy and cheap.

As regards Sir W. W. R. Omslow's new lease for 42 years at 1-24th royalty, it certainly is of such a stamp as should encourage energetic working, and is in keeping with the times of reduced values for metals, so as to admit of profits being earned by the adventurers. Your correspondent, however, is wrongly informed about my asking a high price for the property. My intention is certainly to retain an

interest in it, and to make sure of its being honestly worked, having sufficient capital without being overweighed. But who would not retain a share in a property in which he thoroughly believes, after the expenditure of several thousand pounds in purchasing the previous lease of the mine, paying up the debts and Stannaries costs of a previous company, getting a proper legal assignment to the mine, besides the costs and charges of the steward of the late Sir Matthew Omslow, in addition to the outlay for machinery and work upon the new mine, all of which was necessary to obtain the property, which Sir W. W. R. Omslow has taken into account in granting the new lease to me while others were after it. However, if your correspondent will write to me, with his name and address, he can easily learn my terms, and we may prove of mutual assistance to one another. But he should write soon, as I am about to bring it out before the public.—*Cranmer-road, S.W.*

GEORGE GREGORY.

BWLCH UNITED MINES.

SIR,—Having lately visited Cardiganshire, I took the opportunity thus afforded of visiting the above mines. On arrival Capt. W. Northey took me over the surface, and I was greatly pleased with the work done there, the drawing, pumping, and crushing wheels working first-rate. I was told that a new jigger had been ordered, and would arrive on the mine this week. This with a few necessary alterations on the dressing-floors will be quite adequate work for the present. We then went underground to view the new, now called Marvin's lode, 15 fms. under adit, and it was a beautiful sight, the ore flashing and sparkling like diamonds; it is now 6 ft. wide, with a good mixture of splendid silver-lead ore throughout, and the captain tells me it is improving every day. On arrival at surface, it being late, we postponed going down Ritchie's shaft till the next day. Early in the morning we changed and went down to the lode in the east of the 50; it is from 4 to 5 ft. wide, composed of carbonate of lime, quartz, blende, and spots of lead—a most kindly looking lode, letting out a great quantity of water. I should not at all be surprised to hear at any moment that a large deposit of lead had been met with. We then visited the lode in the high backs of the 30. Here is certainly the most interesting point in the mine, the captain telling me he can return from 35 to 40 tons per month of silver-lead ore from this one place alone. The lode is worth about 25 cwt. per fathom. In conclusion, I may say that I was greatly pleased with every point in the mine, and am sure that in a short time it will "speak for itself."

Dalston, London.

SHAREHOLDER.

[For remainder of Original Correspondence see this day's Journal.]

Meetings of Public Companies.

RIO GRANDE DO SUL (BRAZIL) GOLD MINING COMPANY.

An extraordinary general meeting of shareholders was held at the offices of the company, Finsbury Circus, on Friday, the 17th inst., Mr. BURROUGHS D. KERSHAW in the chair.

Mr. J. ARTHUR MORGAN (the secretary) read the notice convening the meeting.

The CHAIRMAN said when the shareholders last met the directors felt disappointed that Mr. Clemes was not with them, but he would have been present had he known the date of the meeting, but not knowing that he went straight off to Falmouth. He (the Chairman) then stated that when Mr. Clemes came up to London he would be invited to meet the shareholders, and that the ore which he brought over should be opened in his presence and properly assayed. The boxes were opened at the offices of Messrs. Johnson, and Mr. Clemes was able to see that everything had been left just as he placed it at the mines, and also as regards taking fair samples for the assays. The whole of the ore was broken up and placed in one heap of certain height. Then in order to take the samples fairly the men made a cross trench longitudinally, and then two cross-cuts, so that the two cwt. of stuff that were assayed were taken out of the heaps quite fairly. In a great many cases assays were taken from one or two rich stones, and thus the result was by no means a correct one; but in this case there could be no doubt that every precaution was taken to ensure an accurate assay. The rest of the ore, amounting altogether to 18 cwt., had been crushed up and samples taken of the whole, and the remainder was going to be sold just as it is. Having introduced Mr. Clemes to the shareholders, the Chairman read the report made by that gentleman on the position and prospects of the property. [This report appears in our advertising columns, and is well worthy of attentive perusal.]

The CHAIRMAN then said with respect to the report he might say a few words as to what, under Mr. Clemes' advice, the directors considered best to be done. The present reduction works were situated at the village of Lavras, four miles distant from the mines, so that the cost of transporting ore and materials from and to the mines was very great, and the wear and tear of carriages and animals—the country being a hilly one—was very considerable indeed. The water in the river at that point was not in sufficient volume to work all the ore, and Mr. Clemes had wisely selected another site, distant only a mile and a half from the mines. A tramroad or a winding road for the present could be made, and thus a great saving would be effected in the carriage of ores and materials. Mr. Clemes had secured a large water wheel, which had only to be removed to the new site and erected there, and then he would be able to put the stamps to work. This discovery would, of course, save them a good deal of expense. With regard to the samples from the Aurora Mine which Mr. Clemes brought over in separate boxes, four of them were assayed by Messrs. Johnson, with the following result:—No. 1 gave 63 ozs. gold and 24 ozs. silver per ton of 20 cwt. No. 2 sample gave 64 ozs. gold and 17 ozs. silver per ton of 20 cwt., and the sample taken from the large heaps of rough ore gave 33 ozs. gold and 11 ozs. silver to the ton. There was 150 tons of this stuff at the mine ready to be crushed as soon as they got the water wheel erected and the stamps at work. If they took Messrs. Johnson's assay of 64 ozs. of gold to the ton, no doubt they would be able to pick out a great deal of that, and that would give them the value of the gold and silver 233*l.* per ton of ore, which he need hardly say would leave a very handsome profit in crushing; that is to say, if the pay part of the ore were picked out and crushed separately, and they took out the rest, the average would be something like from 4 to 6 ozs. of gold to the ton, which would also give very handsome results. Mines getting less than half an ounce of gold to the ton were paying good dividends, and with an average of from 4 to 6 ozs. of gold to the ton he thought their mine would be second to none yet before the public.

Mr. Clemes said, with respect to the assay of 53 ozs. to the ton from the large heap, that he fancied there must have been some mistake in selecting the samples, for he would not compute it to contain more than from 1 to 2 ozs. to the ton. In any case the mine was richer now than when he knew Morro Velho first, and he could say that from personal observation.

The CHAIRMAN added that it was extremely difficult to get a proper gold assay without treating about 150 tons of ore so as to get a fair average. The directors proposed to issue the remaining capital according to the original prospectus. They had now issued 5951 shares, besides the 2400 shares, and they now proposed to issue the remainder of the 12,400 A shares. The first prospectus had been registered in the Brazil, and it had been thought better to make up the first issue to 12,400 A shares, and they would then have a balance of 4913 shares to complete the first issue according to the prospectus, and on this issue it would be proposed to make the calls in this way—1*l.* on application, 1*l.* 10s. on allotment, and the balance by two instalments at intervals of not less than three months if it were found necessary to call up the remainder. It was desirable that they should issue sufficient shares to enable them to get a quotation on the Stock Exchange, for though the fact of a quotation was no criterion of the value of a mine, some people were inclined to be suspicious if a mine did not appear in the list. Mr. Clemes, having so recently returned from the mines, would give the shareholders a fair and truthful account of what he had seen and what he thought it best for them to do for the welfare of the company.

Mr. GRIFFIN asked what amount of cash the company had for current expenses?—The CHAIRMAN said the balance at the bank was about 600*l.*

The CHAIRMAN, in reply to a further question from Mr. GRIFFIN, who said he had only just returned from the Brazil, said a call had been made which, when paid, would leave them with about 9000*l.* in hand, including the balance at the bank. The number of shares issued was 5081*l.* and the last call made was 1*l.* 10s. per share.—Mr. GRIFFIN asked whether it was thought that the shareholders were going to pay up?—The CHAIRMAN said it was, and that a great many shareholders had already paid up in full.

Mr. BERGTHEIL thought the report was a very satisfactory one, especially when it was remembered that Mr. Clemes was not sent out to get up a prospectus, or to float the mine, but really to find fault and to see whether the statements upon which the property was sold were true or false. (Hear, hear.) This being the case he hoped that no shareholder would be so foolish as to forfeit his shares, though it would be a good thing for the rest of the shareholders if they did so, for the shares would in a short time, he hoped, be saleable at a large premium. (Cheers.) The shares had already, since Mr. Clemes's return, gone up to a considerable premium. Mr. Clemes went to the mine with his mind prejudiced against it and its management, and he came back bringing with him 18 cwt. of stuff collected under his own eyes from fairly taken samples, of which they obtained a result of 64 ozs. of gold and a considerable quantity of silver to the ton. Could any man in his senses wish for anything more satisfactory so far as the mine is concerned? He could not say so much for the management. The directors had done all they could in this respect, but he admitted they had been unfortunate. They had, however, secured an undoubted title to the property, and all they wanted was to work on as partners in a peaceful manner. With the assistance of the shareholders he believed the property would be a fortune to them, but with discord their shares would not be worth sixpence. (Cheers.)

Mr. GRIFFIN said the property was of enormous value—(hear, hear)—but the management out there had been one of the most confounded he had ever heard of. (Hear, hear.)—Mr. BERGTHEIL remarked that Mr. Bankart had been dismissed but they had to take legal proceedings to get rid of him.—The CHAIR-

MAN added that on Dec. 24 a telegram was sent out stopping all payments to Mr. Bankart.

Mr. MARTIN said that Mr. Clemes was now the consulting engineer to the company, and he was sure they would not have a better man to advise them.

Mr. CLEMES having explained the plans of the property, said it took in almost two counties, and was as large as London and the suburbs together. Any part of it was at their will for a period of 90 years, with a small observance to the Brazilian Government. The climate was very superior to that of England; it was in about 32 south latitude, and the soil was of an undulating character, something like South Devonshire. The general geological formation of the mine was of a gneiss character, and differed from the granite formation, though many of the elements were the same in each. The village of Lavras was built upon the discovery of gold in the neighbourhood, and probably contained about 800 inhabitants, and there was a river—the Camacão—running in a very circuitous manner. The shaft at the Aurora Mine was put down by a late captain of the Morro Velho Mines, but he was not a big enough rogue for the Germans he had about him. There was every indication that by further exploration the mine would increase in value, and he had very little doubt as to the results. The lode itself was very wide, and there were parallel lodes on the southern side, but these had not been explored. The establishment was quite in its infancy, and the whole area explored was not larger than that room, and about twice its depth. Having lived in the Brazil for over ten years, and knowing the strong disposition of the Brazilians in the north-eastern provinces to embark in mining ventures, he was surprised to find that in this province, the people were disinclined to take an interest in mining, and were exceedingly ignorant as to the value of the property. The lode had only been worked for a width of 2 ft., and so far as he could judge he believed the result would be it would yield upon further exploration from 10 to 20 cwt. gold per ton. In his 50 years' travels and experience in America and Africa—where he brought out the Cape Copper Company—he had never seen a better property than that which this company possessed, and he thought that with the 25,000*l.* now proposed to be called up, making 35,000*l.*, and with a really good, honest, clever man to manage it, they would have a very valuable property, and one that would not give them any aches or arrangements. (Cheers.)

A SHAREHOLDER said 64 ozs. of gold from 18 cwt. of stuff seemed a fabulous return.—Mr. CLEMES replied that there was some stuff amongst the specimens exhibited that would give 200 ozs. to 1 ton.

Mr. BERGTHEIL thought that if they were able to issue the rest of the shares they would not have to ask for the payment of the 1*l.* 10s. per share on the shares already issued which was due in July. That was his own idea.

Mr. GRIFFIN said the value of the mine was something fabulous.

A SHAREHOLDER asked if the title to the property was now satisfactory?—The CHAIRMAN said it was. Mr. Clemes brought all the documents back with him, and everything was now complete.

Mr. CLEMES said that in their co-proprietors, the vendors in Brazil, they had men of first-class standing, not only as to wealth but as intelligent men, and the shareholders might rest assured that the titles were secured. The company had now entire control of the property.

A SHAREHOLDER asked who was in charge of the mines now that Mr. Bankart had been dismissed?—The CHAIRMAN replied that the second in command, Captain Pooley, was now in charge, but they were not doing any very great work. They were opening down the Aurora Mine, but nothing had been done with regard to reduction works. Of course what was being done was not waste labour, for all the stuff that was being raised would be treated when the stamps were put up. What they wanted now was a good honest manager.

Mr. CLEMES hoped the shareholders would not go away with the idea that they were going to get 64 ozs. of gold to the ton; but there was every reason to believe that they would have 2 or 3 ozs. to the ton, and that would be a very good result.

The CHAIRMAN said they had the concession for a large tract of country, and he hoped that when Rio Grande was established among the valuable mines, they would be able to lease out some of the other properties either for a fixed sum or at a royalty.

Mr. BERGTHEIL remarked that the directors had much more confidence in the property since it had been inspected by Mr. Clemes, and he trusted that the shareholders would assist them in carrying operations out to a profitable end. (Applause.)—The meeting then closed with a vote of thanks to the Chairman and to Mr. Clemes.

KAPANGA GOLD MINING COMPANY OF NEW ZEALAND.

A general meeting of shareholders was held at the offices, Austin Friars, on Monday.—Mr. TUFNELL SOUTHGATE in the chair.

Mr. W. J. LAYINGTON (the secretary) read the notice calling the meeting.

The CHAIRMAN said—Gentlemen, we entered so fully into all the matters connected with the mine, its position, prospects, and everything at the meeting we held here on June 2, that the directors did not think it necessary to issue any report for the meeting to-day; but inasmuch as I stated at that meeting that the accounts would be submitted to the meeting to be held to-day, we have put them before you, and they speak for themselves; they are very simple; they have been audited, and I shall be very happy to answer any questions which any shareholder may wish to put with respect to the same. They are, as I said, very simple and easily understandable, and I think you will find they agree with the figures which I gave you at the meeting held here on June 2. I, therefore, propose, without further preface, to move that the accounts as circulated to the shareholders be received and adopted.

Mr. PETER WATSON: I shall be very happy to second that, Mr. Chairman, in order to put the meeting in order.

Mr. T. C. PARRY: They are very simple; the creditors only seem to amount to 211*l.*—The CHAIRMAN: Is there any question arising on the accounts on which any shareholder would wish for information?—Mr. McGEORGE: The accounts being for only 12 months, I suppose you have not had time to make any mistakes yet. (A laugh.)—The resolution was then put and carried.

The CHAIRMAN: By the Articles of Association no directors go out of office until 1882, therefore you have no directors to elect or re-elect to-day; but there is an officer you have to appoint, and that is an auditor, and a most important officer he is. The first appointment is with the directors, and an appointed auditor, who audited these accounts, who is well known to most of you, and also well known in the City of London—Mr. Edward Ashmead. It is for the shareholders to confirm that appointment. I shall be pleased if some gentleman will move the re-election of Mr. Ashmead as auditor for the ensuing year.

Mr. McGEORGE: From the very good character you give him I shall be happy to move Mr. Ashmead's re-election for the ensuing year as auditor, with a remuneration of five guineas.—Mr. GIBBS seconded the motion, which was put and carried.

The meeting was then made special for the purpose of confirming the following resolutions passed at an extraordinary general meeting of the company held on June 2:—

That, in accordance with Article 35 of the regulations of the company, the capital of the company be increased to 100,000*l.* by the issue of 50,000 shares of 1*l.* each beyond the existing capital.

That the directors may agree to allot, and may allot, such part of the said increased capital not exceeding 25,000 shares as fully paid up shares *pro rata* among the persons who shall agree to subscribe for the first 25,000 shares of the increased capital, and shall accept such shares and shall pay thereon such sum as the directors shall require to be paid on the allotment of such shares.

The CHAIRMAN: Gentlemen, this extraordinary general meeting is called to confirm the resolutions which were passed on the 2nd June last, for raising further capital. At that meeting there was a very fair number of shareholders present, and I think they will agree that the matter was then very well talked out. A copy of what took place at that meeting was sent to each shareholder, so that all the shareholders may know exactly what did take place, and be kept well informed of everything connected with the matter. Since then we have not received any news of great importance. We have had a communication from Captain Thomas, in which he intimates to us that he has sunk 31 ft., and that he sunk 12 ft. in April, which is satisfactory. (Hear, hear.) We have also had a communication from him by wire with respect to the property which I mentioned at last meeting. It was possible we might think it judicious to acquire this adjoining property just to the south, and we had a communication from him to say that he thinks we shall be able to acquire that property without hardly any expense at all, for a mere bagatelle. That is important, because, as he says in his letter to us, it will enable us to work at Scotty's reef with great advantage, and continue cross-cutting quite on, and he is certain we can get tributers to work there if we get that reef, and it is important if we can acquire it. I do not say that we can acquire it. "There's many a slip twixt the cup and the lip," and I would rather have a communication to say we have got it.

Mr. McGEORGE: What is the extent of this adjoining property?—The CHAIRMAN: I think quite equal to Kapanga.

Mr. T. C. PARRY: You say there is scarcely any cost. I suppose there is a royalty to be paid?—The CHAIRMAN: No; it is a sort of nominally dead rent.

Mr. PARRY: The meaning is that there are no expensive leases to be purchased?—The CHAIRMAN: Nothing of the kind. (Hear, hear.)

Mr. McGEORGE said that the chairman was reported to have said at the last meeting that they had got a good lode.—The CHAIRMAN said that was a misprint of a telegram which had been received and which should be read "Cut good lode soon." The meaning was that the ground was full of minerals, indicating the early cutting of a good lode.

Mr. PARRY: The main thing we want information upon is the probable amount of money wanted for sinking and for the general manipulation of the ground. That is the main thing, and it is a difficult question to put, and it is almost impossible for you sitting in Austin Friars to say exactly what is wanted. But I suppose estimates have been made, and that you are not asking the shareholders to contribute a further sum to this undertaking without having informed yourselves as far as you can as to the probabilities in this case?—The CHAIRMAN: We have gone into the matter very carefully, and taken the figures somewhat in this way. If you refer to the report of Capt. Nancarrow you will see he says we require 5000*l.* to sink the shaft, which is exclusive of any charge for winzes and driving of levels and other expenses of the mine. Supposing we put down 5000*l.* for the other work. Then we think it would be very advisable to send out some boring machinery; at all events we wish to be in a position to do so. (Hear, hear.) We have not done it hitherto. My friend on my left (Mr. Peter Watson), has a better knowledge and judgment of the expense of that than I have, but we think 2000*l.* will go a long way to supply that.

Mr. PARRY: Is the machinery used for such purpose different from the boring machinery used in ordinary mines in this country?—The CHAIRMAN: No; but you have to send it over to New Zealand, and it is no light thing to have to send machinery out. When we sent some out the other day we had to cut the hold of the vessel to get the machinery in. Well, we put 2000*l.* down for that, which will make 12,000*l.* We include nothing for staff expenses. There are certain expenses in London which I do not think you will say are excessive. (Hear, hear.) There were put down at 2000*l.* for 12 months. In addition we owe 1000*l.* or 1200*l.* One of the gentlemen at the board advanced the money for the last remittance.

Mr. PARRY: That is very satisfactory, as it shows his confidence.—The CHAIRMAN: I do not know why I should not mention his name. It is Mr. Peter

Watson, who is *facile princeps* in mining matters, and he lent us the money last month, and I suppose he will do the same again. (Cheers.) I suppose he thinks there is a chance of getting it back with something else. (Hear, hear.) Well, the sums I have mentioned would make a hole in 20,000.

A SHAREHOLDER: In other words you contemplate the 25,000, being called up?—MR. PETER WATSON: Certainly. Ultimately, but not all at once.

THE CHAIRMAN: Capt. Nancarrow says that it will take 12 months to go down to the depth we propose, but perhaps it would be safer to put it at 18 months.

MR. MCGEORGE: What chance have you of getting the money?

THE CHAIRMAN: We have sent out a circular, and have received replies from several shareholders stating that they will take up their quota, and we have also received communications from one or two persons who are not shareholders, stating that if there are any shares left over they will take them. (Hear, hear.) I may mention that we have received a large number of proxies to-day in favour of the resolutions being confirmed, which, of course, is satisfactory of the course proposed to be adopted. I may add that several shareholders have agreed to take more than their proportion.

MR. MCGEORGE asked whether shareholders could apply for any number of shares they liked. THE CHAIRMAN: Certainly; shareholders can apply for as many as they like. MR. PETER WATSON: I shall apply for more than my share. (Hear, hear.) MR. WILSON said he and his friends intended to apply for their proportion of shares.

MR. GIBBS said the position of the company was very much better than 12 months ago; then there were considerable liabilities and directors' fees; that was now altered, and the company was undoubtedly in a better position.

A SHAREHOLDER: What are the directors' fees?—THE CHAIRMAN: There are five directors, and they divide between them the moderate sum of 250*l.* per annum.

THE CHAIRMAN, in reply to Mr. MCGEORGE, said he had not information at hand which would enable him to give the depth to which other mines in the locality had been carried. MR. PETER WATSON: In the *Mining Journal* of last week I see that one gold mine returned 13 tons of gold in one year, which would be about 350,000 *ozs.*, or 1,000,000*l.* worth of gold.

The Chairman then formally moved the confirmation of the two resolutions given above, passed at the meeting held on June 2. MR. PERRY seconded the motion.

MR. BOLTON, *sen.*, said that at the last meeting a suggestion was made that the shareholders who wished could pay up their shares in full, so as to be able to claim the bonus shares. He should be glad to hear from the Chairman whether shareholders could pay up in full. THE CHAIRMAN: Should any shareholder wish to pay up his shares in full, so as to acquire the bonus shares, the board have come to the conclusion to accept the same. (Hear, hear.)

A SHAREHOLDER asked whether any interest would be paid on the amount so paid in full?—THE CHAIRMAN: No, we give him bonus shares, but no interest.

MR. PARRY: At what rate do you propose to call up this money?—THE CHAIRMAN: We propose 2*s.* 6*d.* on application, 2*s.* 6*d.* on allotment, and the balance as may be required by the directors.

The motion was then put and carried.

MR. PARRY moved a vote of thanks to the Chairman for the courteous way in which he had conducted the business of the meeting?—MR. MCGEORGE seconded the motion, which was put and carried.

THE CHAIRMAN acknowledged the compliment, and said he wished again to mention that each shareholder could apply for any number of shares he liked. The meeting then broke up.

QUARTZ HILL CONSOLIDATED GOLD MINING COMPANY.

The statutory meeting of shareholders was held at the Cannon-street Hotel, on Wednesday.

Sir RICHARD GETHIN in the chair.

The notice calling the meeting was read by Mr. EDWARD JENKINS, the secretary.

THE CHAIRMAN said that this was the statutory meeting held in compliance with the Act, which required a meeting to be held within four months of the registration of the company, and the directors were very pleased to meet the shareholders on the present occasion, because they were able to report very favourably on its present position and future prospects. The directors had received numerous statements in reference to the property, all of which were of the most satisfactory character, and some of them were from men whose opinion was universally admitted in all mining matters to be reliable. The directors had taken every possible means to verify these statements, and had found them substantially correct. The working of the mine was taken over on May 1, and they had appointed Mr. Fagan as manager of the mine for three years, who had considerable experience in mining matters. Mr. Fagan was present, and would be happy to give further particulars as to the capabilities of the mine.

MR. FAGAN said he had been connected with the mine six or eight years, and had been in the Colorado district for upwards of 16 years. This mine was known as one of the best in the district. They had got 1300 ft. deep, and he had taken out \$900,000 in gross, and had made \$230,000 of net profits. He commenced working with little or no machinery, and at the present time they had got, probably, one of the finest mills in the country and the finest pumps to be found in the Rocky Mountains, and they had the finest set of machinery, which could not be duplicated for less than \$100,000. It had produced \$8000 to \$13,000 gross per month, making 25 to 30 per cent. profit, and he hoped and believed that in August they would commence paying dividends. The dividend for the first two years would be small compared with what it would be afterwards. All these mines when developed, which he hoped would be in the next 18 months or two years, would pay equally well. In the Kansas Mine, at the bottom of the shaft, they had the best ore they had yet found. It would be three or four months till they got the new vein. They could not tell how big that vein was, and how far it would extend. His opinion was that it was an entirely new vein, and if so, there would be 1500 ft. of additional ground to work upon. At the end of 18 months they ought to be able to double the amount of dividend. This year he hoped they would make 5 and 8 per cent. dividend. The object of the directors would be to develop the mine as fast as possible.

MR. FAGAN, in reply to a question, said they might do better than 5 per cent. this year, but in making statements regarding dividends it was always well to keep within bounds. The dividend of 5 per cent. to which he referred was to the Kansas mine, there were other mines which could not be worked for 12 or 18 months. The manager states that a dividend will be paid in August next. He then read a long statement from Mr. Craven, the under-manager, now working the mine, who will commence crushing next week, and the gold will be shipped to London next month, and increase every month; in fact, he stated the company would, in his opinion, be able to pay over 50 per cent. within 18 months.

A SHAREHOLDER: How much can you raise?—MR. FAGAN: About 25 tons per day from the ground which is open. At the end of the year he hoped to have 25 or 30 men more at work. It was only a question of getting the levels down, and then they would get into more ore and all the mills. When they got down about 300 ft. they expected to get into the Californian vein, which was the best veins in the district. If the veins came together the oldest property, which was this company's property, had the right to follow the vein wherever it ran.

Some desultory conversation ensued, in the course of which Mr. Fagan expressed his entire confidence in the future of the mine.

THE CHAIRMAN, in reply to a question, said that 58,944 shares had been applied for, besides the vendors' shares. That was not sufficient to enable the directors to obtain a Stock Exchange quotation, but the board intended to issue the remainder of the shares on hand.

A SHAREHOLDER called attention to the fact that in the prospectus the statement was made that 100,000 shares had been applied for, and he could not see how that statement could be reconciled with the statement now made that only 58,944 shares had been applied for. THE CHAIRMAN said the directors at the time they made that statement in the prospectus were led to believe 100,000 shares had been applied for as stated, and any shareholder on applying at the office could receive full information on that point.

Some discussion ensued on the point, after which the meeting broke up.

THARSIS SULPHUR AND COPPER COMPANY.

The annual meeting of shareholders was held at the Merchants' Hall, Glasgow, on Wednesday.

MR. CHARLES TENNANT, M.P., in the chair.

The usual preliminaries having been disposed of, the report of the directors was presented, showing that the profits for the 12 months ended March 1 (including last year's balance of 14,610*l.*) was 302,509*l.* 12*s.* 1*d.*, out of which the directors recommended a dividend of 25 per cent. free of income-tax, which will absorb 284,165*l.*, leaving 18,344*l.* 12*s.* 1*d.* to carry to credit of next account. During the year 99 capital shares of the French company were redeemed for 1033*l.* 2*s.* 8*d.* leaving 411 unredemmed, representing 4288*l.* 1*s.* 8*d.* Of the 1033*l.* 2*s.* 8*d.* were exchanged for 173 full-paid Tharsis shares. There are still 1188 Jouisance shares outstanding. All the exchanged shares have received payment of the dividends due thereon. The amount of dividend due and still unclaimed on these shares is 2168*l.* 2*s.* The shareholders will remember that while they were merely lessees of the mines the Tharsis Company purchased, in the open market, 2304 Jouisance shares of the French Company—a purchase which, at the time of the fusion, entitled them to receive in exchange 1152 shares of their own Tharsis Company. By the sale of 1000 of the shares they have completely refunded the original price of the whole, besides realising a profit of 14,382*l.* 2*s.* 8*d.*, which is added to the profit and loss account of the present balance.

The total mineral raised from March 1, 1880, to March 1, 1881, at Tharsis and Calais, is 373,059 tons, as against 438,485 tons during the previous financial year. The large accumulation on the mines or stocks of ore from previous years induced them to curtail their output, so as to work up a portion of these stocks, and turn it into money. The supply of labour has been all that they required, and their work-people have been industrious and contented. The rain-fall has been abundant, and their stores of water larger than ever before, assuring them of supplies for their copper production for a long time to come.

The working of the railway, pier, cranes, and mineral depot, &c., at Corrales, continues satisfactory. Of pyrites there were shipped 186,252 tons of large ore, and 5843 of small ore—a total of 192,095 tons. Of precipitate there were shipped 753 tons. The amelioration of the portion of the line at the San Bartholomew river, alluded to in last report, and for which the sum of 16,000*l.* was laid aside from the profits of 1879, has been carefully studied, and is about to be carried into effect, and it is hoped may be accomplished satisfactorily at a sum considerably less than the above estimate. In all other respects the railway and rolling stock are in excellent order, and are maintained in a state of thorough efficiency.

The production of the metal works has gone on with regularity during the year. They are all being gradually equipped for the extraction of silver and gold by the Cluudet process, which was begun in 1879, and is now being worked by the company under a license from the patentee. The outlay at all the works by furnishing the necessary plant amounts to 6535*l.* 7*s.* 2*d.* All repairs have been charged to revenue. The depreciation at 5 per cent. is 11,374*l.* 14*s.* 3*d.*; a reduction on the metal works property amount of 4839*l.* 7*s.* 1*d.*

The pyrites involved to customers amounted to 179,045 tons, as against 159,264 tons. The iron ore produced was 190,925 tons, and the quantity delivered 166,616 tons. The production of copper has been satisfactory, and the prices for

iron and copper have been better on the average. There was no change in the price of sulphur. The silver and gold extraction is giving good results, and all the works are expected to be in full operation in this department during the greater part of the current year.

About the beginning of January last a new process for the extraction of the precious metals patented by the late Monsieur Desnoilles, Chemist, Paris—the rights of which had been acquired from him by influential parties in that city—was brought under the notice of the directors. Experiments on Tharsis and other similar ores, conducted on a small scale in Paris, gave promise of profitable results; and negotiations led to an agreement by which the Tharsis Company obtained the right to acquire a large share of the control and benefits of the process. Investigations on a much larger scale have been in progress in this country, and are still being prosecuted; but the directors are not yet in a position to report that the results obtained on the small scale in Paris have been confirmed on the large scale at their works. The experiments will be carried to an exhaustive conclusion. The original patents contemplated merely the treatment of gold and silver ores, and embrace a great part of the world, as does also the agreement they have made. As yet it has not been possible to procure such ores for an extensive trial in this country; but there is now the prospect of their doing so ere long, and should results render a special report to the shareholders desirable during the current year the directors will not fail to issue it.

The various inventors of stocks in this country and in Spain have been carefully supervised by the directors and auditors, and have been valued at safe prices. The mines in Spain have been written down by the sum of 20,000*l.*; the miscellaneous assets by 20,000*l.*, which now extinguishes them; and the sum of 30,000*l.* has been carried to the reserve fund. The whole of these items have been charged to profit and loss. Of the debentures the sum of 33,500*l.* fell due on Dec. 1, when the bonds were paid off.

THE CHAIRMAN, in moving the reception and adoption of the report and accounts, said that they were inclined to think that a rearrangement of the company's stock might, with advantage, be gone into at this moment, which would enable a satisfactory settlement to be come to with the 7*l.* holders, and which would, at the same time, tend to strengthen the position of the company. The rearrangement they contemplated would involve the calling up of 12 on the 7*l.* shares, and consolidating them into stock. It would also involve the raising the total authorised capital of the company from 1,236,650*l.* to 1,250,000*l.*—an increase of 13,350*l.*, by which the creation of a certain number of new shares, which would not be issued to the shareholders, but would be retained by the company, and only sold as their debentures fall due in 1883, and for the purpose of paying them off. The first of these debentures fall due in 1883, and the last in 1886. Their desire was to get rid of all preference claims, for such these are, and let the whole earnings of the company vest in the shareholders. This is the position at which they are aiming, and which their scheme will enable them to reach. The propriety of reducing shares from 10*l.* to some lower figure, so as to bring them within the reach of small investors, is also engaging their attention. The details would be laid before them in a special report; and the directors thought they would find therein an acceptable solution of the 7*l.* shares, and at the same time a proposal which will be advantageous to the general interests of the company.

The motion having been seconded by Mr. ALFRED MESSEAU and agreed to, the retiring directors were re-elected, the auditors were re-appointed, and a cordial vote of thanks having been accorded to the Chairman, the meeting terminated.

BRAZILIAN GOLD MINES.

The first annual general meeting of shareholders was held at the offices of the company, Palmerston Buildings.

MR. ROBERT WILSON in the chair.

The notice calling the meeting was read by Mr. G. C. HARVEY, the secretary. The report of the directors, which has been forwarded to each shareholder, was taken as read.

THE CHAIRMAN said: Gentlemen, before proceeding to business I regret to inform you of the death of our friend Mr. Harvey, and I am sure you will share the regret which the directors feel at the loss which we have sustained by his death. (Hear, hear.) I have also to announce that Mr. Carne, residing at Liverpool, from illness and old age, has resigned, and we have elected Mr. Thomas Tregellas in his stead. Mr. Tregellas has been at the mines, and we believe that from his experience he will prove a great acquisition to the company. Turning to the report and accounts, you will observe that the capital of the company is 80,000*l.*; our issue is only 40,000*l.*, and the subscribers to the first issue are entitled at any period up to the end of this year to call and receive share for share by paying 12 per share. That option expires at the end of this year. We have purchased the property for 20,000*l.*—namely, 6000*l.* in cash and 14,000*l.* in fully paid shares. When these accounts were made up there was 11,000*l.* due on calls, but it has since been reduced to 6000*l.*, which is owing by one shareholder, and he has promised to pay the whole amount by the end of next month, with interest.

MR. ALFRED PARRICK: Do you regard it as a good asset?—THE CHAIRMAN: Yes; we hold 1000 shares as security. You will see by the report that Mr. Greig, the vendor, owes the company 318*l.* 14*s.* 3*d.* in respect of his proportion of agreed costs in Brazil. That may seem a curious amount, but I may mention that when the property was transferred out there from the original proprietors into a name, and then from that name into our company, we had to pay double stamp duty and other legal duties, which are disputed by the vendor, and he left us 4000 shares as security; but as the dispute is settled we shall call upon him to pay up that amount. You will see that the salaries and wages and working expenses at the mines amount to 2381*l.* 11*s.* 11*d.*, including Government duty and stamp; the commission on transfer of property in Brazil and manager's drafts, 388*l.* 14*s.* 8*d.*; the preliminary expenses (being legal expenses in London, stamps, registration of company, and brokerage), 152*l.* 15*s.* 8*d.*; and the directors' fees, travelling expenses, &c., make up the balance. The London expenses are rather large, but they include the brokerage, stamp duty, and law expenses, and everything relative to my detailed report. I desire now to inform you of our progress for the past three months. 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last general meeting asked a question with regard to the duplicate parts of the hydraulic apparatus, and it was explained they would communicate with Mr. Darlington, and ascertain from him whether he would recommend any particular parts to be duplicated; but unfortunately Mr. Darlington had been obliged to go to Spain, and he was not, therefore, able to be present here to-day. Mr. Thomas, however, was present, and would be pleased to give all the information in his possession upon the subject, but would be as well to mention that provision had already been taken in the agreement with Mr. Trevorton, the engineer recommended by Mr. Darlington, for working the accumulator with water instead of steam power. They were now expecting from Mr. Trevorton a report on the subject as to whether the 60-ft. wheel with a small outlay could be utilised for the purpose, and so soon as Mr. Darlington returned to London the directors would at once confer with him as to his views as to sending out any duplicate parts, such as a duplicate engine, which would place the company beyond the reach of accident in the event of the present engine breaking or failing for any time. The Chairman then moved the adoption of the report and accounts.

Mr. RYAN seconded the motion. He said, although there was an item of 349l. in the accounts for the directors' fees, they had not taken any. They received in the beginning of the year 62l., and the rest consisted of salary of the managing director. The next item for salaries (226l.) was for the clerks in the office, and they had reduced that to 156l. The office rent had also been reduced as much as possible, so that he did not think they could be charged with extravagance in London. With regard to the debenture interest, probably some of the debenture-holders were under the impression that their debentures were now running at 30 per cent. That was not so. Some question was raised as to what interest should be continued after the contract for 12 months, and they took counsel's opinion on the subject, which resulted in its being fixed at 10 per cent.

Mr. HILL thought it a most ungracious thing to reduce the rate. It was taking advantage of their own default because they did not pay up at the time the interest was due.

Mr. DAWSON explained that 20 per cent. of the first year's interest was to be paid as a bonus, and begged the debenture-holders to remember that it was a question as to what interest the directors wished to pay, but at what rate they would be justified in paying it. They were thought desirable a meeting of the debenture-holders would be called to put the matter before them.

Mr. HILL said he would be quite satisfied with that.

Mr. DAWSON, in reply to Mr. RANSFORD, said he did not think there would now be any difficulty in forking the mine.

The motion for the adoption of the report was then put, and carried unanimously.

The retiring directors and auditors were re-elected, after which a vote of thanks to the Chairman and directors terminated the proceedings.

WEST CARADON MINING COMPANY.

The general meeting of adventurers was held at the offices, Gracechurch-street, on Friday, June 17,—Mr. H. L. PHILLIPS in the chair. Mr. JOHN WATSON (the secretary) read the notice calling the meeting.

On the motion of the CHAIRMAN, seconded by Mr. GUTERREZ, the accounts, which showed a balance of assets over liabilities of 263l. 13s. 3d. were adopted.

Mr. JOHN WATSON then read the report of the agent, as follows:—

In handing you the report for the general meeting to be held on the 17th inst. I would remark that although we have not as yet met with any large deposits of ore, I may say that at nearly all points whether driving, sinking, or raising, we have discovered ore in greater or less quantities. We have now cleared the 20 ft. level, and have had the mine driven to drive on a branch with a view of reaching the lode in more settled ground; the lode at this point being disordered by coming in contact with Kellow's lode. We have a long run on this lode west, and we have every reason to believe that it will improve when we get into more settled ground. This lode in the winze sinking below the adit level is producing some rich copper ore. Vivian's north lode in the back of the 50 will yield 1½ ton of copper ore per fathom. This lode in the winze sinking below the 3½, west of cross-cut, will yield 1½ ton of ore per fathom. Some lode in the rise in the back of this level, east of cross-cut, will, I am pleased to say, yield about 3 tons of ore per fathom; we have much whole ground here, and in all probability will be found productive. We still think that this lode was missed by the former workers, but this we shall prove as we proceed. A slope to the east of this point on same lode will yield about 1½ ton of ore per fathom. The part of the cross-cut we are now clearing at the 50, south of main lode, is much crushed, consequently the progress is at present rather slow. We sampled on Monday last computed 150 tons of fair quality copper ore to be sold at Truro on the 23rd inst.

Mr. SCHOFIELD asked whether the high parcel of ore was selected from bulk?—Capt. RICHARDS said they drove through ground of which he had a good opinion, and a great portion of the rich ore came from that ground. It came from one lode, which did not continue so rich all through.

Mr. SCHOFIELD: You have no course of ore in any level worth that?—Capt. RICHARDS: No, not at present.

The CHAIRMAN: It is important to notice that in Vivian's north lode, in the rise in the back of the 38, east of cross-cut, will yield about 3 tons of good quality ore per fathom.—Capt. RICHARDS said it was in the best lode, and was splendid-looking ore.

Mr. GUTERREZ: How much will you give us in the next four months?—Capt. RICHARDS: We shall want to discuss that when we come to consider the amount of the call.—The CHAIRMAN: Shall we do as well in the next four months as in the past four?—Capt. RICHARDS: I hope so; there is every probability of it according to present appearances.

Mr. C. B. PARRY: I have had the mine specially inspected by Capt. John Roberts, who is here, and will read his report.

Capt. RICHARDS, in reply to a further question, said the cost for the next four months would be about 900l., but he hoped they would get better results.

Mr. SCHOFIELD said that in considering the amount of the call they must calculate on wanting 900l. for the next four months.—The CHAIRMAN asked Mr. Watson what amount of call he thought would be required?—Mr. WATSON said he thought a call of 1s. per share would be ample.—The CHAIRMAN: I agree that a 1s. call will be ample. If we are, as I believe we are, in a good enterprise it would be well policy to cripple the thing for the want of 3d. or 6d. per share. (Hear, hear.)

Capt. JOHN ROBERTS said that at his recent visit to the mine, a few days previously, he had inspected the workings, and made notes underground. He was informed that the mine had considerably improved since Capt. Richards was there. The following was a brief report of what he had seen and noted:—

June 17.—Agreeable to the request with which you have favoured me, I write the following report from my notes made yesterday and the day before whilst inspecting this mine. At the 50, west of Hallett's cross-cut, on Vivian's north lode, there is a rise by four men, where the lode is worth 12l. per fathom. Below this level the lode is not cut or seen anywhere in the mine; and as this ore is a continuation of the course of ore at the 38, it will, no doubt, continue down as other courses of ore in the mine have done. In the bottom of the 38 this same course of ore is worth, in the eastern end of the winze, 10l. per fathom, and it appears to be just of the same value for some distance away from the winze. The rise is about 3 or 4 fms. to the east of the winze, where there are six men working on a lode, worth from 20l. to 25l. per fathom, and the ore requires but little dressing. This same level is driven for a great distance, I should say 60 fms. on the course of the lode, without having a single rise or winze to prove the lode. Passing through this level I observed in different places where there have been blasts put into the lode, good strong patches of ore which would, no doubt, improve if they were tried further. At the back of the 38, on Vivian's north lode, there are two stopes just commenced; the first is worth 5l. per fathom, and said to be improving. The second is higher up the roof, and the better one. When I was there a hole was bored over 2½ ft. deep in solid copper ore, and although little was to be seen, it laid open one leader of ore 8 in. wide, and another 6 in. wide, with still more standing in the footwall. We may safely value it at 12l. per fathom. On Gilpin's lode at the adit level there is a sump which is being sunk by four men. The lode is about 6 to 8 in. wide containing good strong patches of copper ore, worth 3l. per fathom. The roof over I could not examine; but I was told that it is much richer. There is on this lode a great deal of ground, yet unexplored, and offers a good chance for opening out a good mine in itself. Considering the short time that you have been working, it must be considered that you have achieved a great success. The different points you have in operation are worth, in the aggregate, 62l. per fathom, and if the mine continues to improve as it has done, in a short time it will be worth double that amount.—JOHN ROBERTS, M.E., M.M.S.

Looking at the mine altogether he considered that the shareholders had a splendid property; and he had no hesitation in saying that if the mine had been worked as it ought to have been by the former workers it would have been working immensely to the present day. (Hear, hear.) It seemed to him that, after discovering several large courses of rich ore, the old workers worked under them just whilst they continued, and took out the eyes of the mine, and for that reason the whole thing collapsed. It did not require much skill to work out a course of ore after it had been discovered (a laugh)—and it seemed to him that was just what the old workers had done at West Caradon. He believed the present workers had a grand future before them. (Cheers.)

Capt. RICHARDS said the lode which Capt. Roberts saw worth 3 tons per fathom would, he believed, go up to the north. There was a branch of ore there in several places.—Capt. ROBERTS said, of course, it was impossible for a stranger to go into such a mine and become acquainted with all its ramifications and peculiarities at a single visit.

Capt. RICHARDS said that with regard to the 50 ft. level he was of the same opinion as Capt. Roberts. They had never tried the bottom of the 50; they had discovered ore, but had never sunk an inch, and that lode might be going down just the same.

A SHAREHOLDER suggested that before the next meeting Capt. Roberts should be invited to make a further inspection of the mine. (Hear, hear.)

Mr. GUTERREZ: If Capt. Roberts is correct in his estimate about the aggregate value of 77l., I think Capt. Richards has under-estimated what we shall do. The CHAIRMAN: Capt. Richards is always very cautious in what he does.

When we get the mine more down and more in operation Capt. Richards may be able to enlarge his estimate.—Capt. RICHARDS said he always endeavoured in all his estimates to keep well within the mark. (Hear, hear.)

The CHAIRMAN said he could see no objection whatever to Capt. Roberts making a further inspection of the mine.—Capt. ROBERTS: I am not so clever that I can go down such a large mine, with such extensive ramifications, and grasp the whole thing, and deal with it as some do, or pretend to do, at a single visit. (A laugh.) I cannot do it.

Mr. DARLINGTON said that Capt. Roberts had been down without the assistance of Capt. Richards, which made a great difference.—Capt. ROBERTS said that was so; at the same time he was bound to say they had a very good man as assistant underground agent to Capt. Richards.

The report of the agent was then adopted.

The CHAIRMAN said he was sure they were all much obliged to Capt. Roberts for his report. (Hear, hear.) The next matter they had to consider was with respect to a call. Whatever ore they sold would not come forward in time to

realise cash to pay the wages and so on, and, therefore, he thought they could not do with less than a call of 1s. per share.

Mr. HERITAGE moved that a call of 1s. per share be made, payable on or before July 4 next, and that 5 per cent. discount be made on all payments made on or before that date.

The CHAIRMAN seconded the motion, which was put and carried.

On behalf of the company, and Mr. Watson would hold it in trust for the company. There were no onerous covenants in it, but at the same time it was only right that Mr. Watson should, as was usual in such cases, be indemnified by the adventurers in respect to this trusteeship.

Mr. WEBB then moved the usual form of resolution indemnifying Mr. Watson, and holding him harmless in regard to his trusteeship.

Mr. C. B. PARRY seconded the motion, which was put and carried.

On the suggestion of Mr. WEBB, and with the full concurrence of the shareholders, the committee were empowered to consider the desirability of remunerating Capt. Roberts for his report.

On the motion of Mr. C. B. PARRY, seconded by Mr. ORLANDO WEBB, was elected a member of the committee, the remuneration of the committee to be increased from three to four guineas per month.

On the motion of Mr. RUSLEY, seconded by Mr. WEBB, a vote of thanks was passed to the Chairman and committee, and the meeting broke up.

NEW WEST CARADON MINING COMPANY.

The general meeting of adventurers was held at the offices, Gracechurch-street, on Friday, June 17,—Mr. H. L. PHILLIPS in the chair.

Mr. JOHN WATSON (the secretary) read the notice convening the meeting, and the following report of the agent:—

In presenting you with the report for the general meeting to be held on the 17th, I may remark that we have now fixed a footway from the 55 to surface, and we shall now be enabled to examine all points above this level, and make every preparation for working this ground more effectively when the cross-cut is holed to the winze we have just sunk. I may here notice that this ground cannot be worked to advantage until this is accomplished; we have, therefore, decided on suspending the level now being driven west, and increase the number of men in the cross-cut south as there is not sufficient air to drive both at the same time, and every effort will be made to accomplish this work as early as possible. The lode in the 42, west of Hallett's cross-course, will yield 1 ton of copper ore per fathom. The rise in the back of this level will yield 1½ ton of ore per fathom. The men are making fair progress in the 33 cross-cut, south of Hallett's shaft, driving for 52 ft. per fathom. In conclusion, I beg to say I see no reason to alter my opinion with this piece of mineral ground, and still believe it deserves a spirited trial and that the shareholders will ultimately be rewarded for their outlay and perseverance.

The CHAIRMAN asked Capt. Richards whether there was anything he wished to add to the report?—Capt. RICHARDS said there was really scarcely anything fresh to report. The ventilation was still bad, and they could not get the stuff to surface, and could do nothing on the lodes at present, until the cross-cut was holed to the winze which had just been sunk.

The CHAIRMAN: How many men are there in the cross-cut?—Capt. RICHARDS said there were four, but he intended to put on six. They were giving 5l. per fathom, and the men were earning good wages.

Capt. JOHN ROBERTS then read his report, as follows:—

June 15.—I have very carefully inspected this mine, and the following report I have taken from my notes made on the mine and at the different places when there. At the 42 on the main lode there is a rise in the roof, where the lode is 3 ft. wide, worth 9l. per fathom. The end driving west is in hard ground, but it has a very kindly lode, about 3 ft. wide, worth 6l. per fathom. This level has not been driven to the west of the cross-cut, but there is a very kindly lode about 2 ft. wide, and I should strongly recommend its being driven on, if it were only by two men. The ground here is quite whole to the surface, and will, no doubt, prove as productive as the same lode has been in former times in the West Caradon. The 33 cross-cut is being driven by four men. The ground at present is rather stiff, and I should say that 3 fms. per month is just as much as four men can drive. I would say that another two men might be put to increase the force and do 4 fms. instead of 3 fms. If this cross-cut be driven as far as Jope's lode it will intersect Downing's and Clymo's; but the whole distance is about 100 fms. The immediate importance of continuing this cross-cut is to get a communication with the 42, so as to be able to get away the ore from that level, as well as to ventilate the 50. Until this be done no ore can be brought up from this part of the mine, and the ore is being raised and stuff accumulating, so that if the stopes and end continue to improve as they have done you will have a great deal of ore to haul away by the time that the communication will be effected, which, judging from the sound of the men working it, cannot be far—may be no more than a month's work. The 50 cross-cut has been cleared for a great distance, but being closely timbered it was impossible to see what lodes there are crossing it. As your agents have been unable, for reasons above mentioned, to clear the mine of the rubbish with which the former workers filled it, I could not make the inspection of all the points as closely as I would have liked to have done; but I am fully persuaded that there are the same chances now as there ever were to make great and lasting discoveries. The ore is of a very good quality and might be easily dressed up to 10 per cent. with good jigging. There is an important feature in this mine which should not be overlooked—the junction of two strong lodes underlying in opposite directions, which cannot, I think, fail to cause the mine to repeat its history before any great length of time has elapsed.—JOHN ROBERTS, M.E., M.M.S.

Mr. C. B. PARRY said there was a very important point where the junction of the lodes was coming together.—Capt. RICHARDS said it was a very important point, but operations had been suspended there for the time. When they got a little more to the west they would be able to work more places together, but at present the mine would not stand it.

The CHAIRMAN: How far is the winze sunk?—Capt. RICHARDS: It is down below where the cross-cut is coming.

Capt. ROBERTS said there was one important point which he found he had not mentioned in his report. On the caunter lode going west there was an end driven away, and it seemed to him that it was converging towards the main lode, and it seemed to him that it was an important matter to drive that lode to the junction. There were there now good patches of ore in that lode, which was not only converging horizontally but vertically.—Capt. RICHARDS said no doubt it was a very important point, and one which was not forgotten.

Mr. GUTERREZ: How many fathoms must you drive on the main lode before you approach where the caunter lode strikes the main lode?—Capt. RICHARDS: 15 or 16 fms.—Mr. RUSLEY: Will you let me know that by the next meeting?—Capt. RICHARDS: I cannot say that with certainty.

On the motion of the CHAIRMAN, seconded by Mr. C. B. PARRY, the balance-sheet, which showed an excess of assets over liabilities, and the agent's report, were then allowed and passed.

On the motion of the CHAIRMAN, seconded by a SHAREHOLDER, a call of 6d. per share was then made, payable on July 4, discount of 5 per cent. to be allowed on all payments made on or before that date.

On the motion of Mr. C. B. PARRY, seconded by Mr. RUSLEY, Mr. Orlando Webb was elected a member of the committee, the remuneration to be increased from two to three guineas per month.

On the motion of Mr. WEBB, seconded by Mr. PARRY, a vote of thanks was passed to the Chairman and committee, and the meeting broke up.

POLROSE MINING COMPANY.

A general meeting of the adventurers was held on the 23rd inst. Mr. J. Y. WATSON in the chair. The accounts showing a balance of 67l. 8s. 2d. against the adventurers were allowed and passed, and a call of 1s. per share was made. The following is the agent's report, from which it will be seen that the Margaret lode is presenting good indications in the 90 and 100 ft. levels. There are also two other points of importance in the mine—the driving of the 90 cross-cut south, and the clearing of the western adit. The latter, it is supposed, was driven 100 or 150 years ago, and has never until recently been re-opened. As the report states, a total of 70 fms. of ground has been opened at the mine during the past three months, a proof that every energy is being used to develop the property as rapidly as possible. Agents' report:—

Since the last general meeting the engine-shaft has been sunk to the 100, plat and barrow-road cut, footway put in, and the shaft divided and cased and made complete to that level. At the 100 we calculated we had to cross-cut 5 fms. south to intersect the Margaret lode, but owing to the lode taking a greater underlie below the 90 the cross-cut was extended 9 fms. 2 ft. before reaching the lode. Since then we have opened west on the lode 10 fms. 3 ft., and east 1 fm. 3 ft.; for this distance the lode has been strong and regular, and the producing, a much better looking lode than in the corresponding length at the 90. In the eastern end the lode is at present looking every bit as well as when first cut, being about 2½ ft. wide, producing saving work for tin; this end is about 30 fms. from the great lookan cross-course against which, in Wheel Fur, Polladras, and other mines, the lodes invariably yielded good quantities of tin; driving by two men, at 5l. per fathom. The lode in the 100 west is about 3 ft. wide; at present it is a little disordered and mixed with killas, as we are now near the cross-course, to the west of which at the 90 the lode commenced to produce tin, so there is every reason to expect an improved lode here on passing through the cross-course, and I am pleased to say that we have lately broken some good stones of tin in the bottom of the end from the capels of the lode; driving by six men, at 5l. per fathom. The 90, west on Margaret lode, is driven 41 fms. from the engine-shaft; the lode is 2½ ft. wide, composed of spar, peach, mundic, and a little tin; driving by four men, at 5l. per fathom; for the last 4 or 5 fms. we have had here a strongly mineralised lode, turning out quantities of mundic, which is a most encouraging feature for the level coming in under it. The 90 cross-cut south is extended 46 fms. 3 ft. from the engine-shaft; during the past quarter we have had a favourable channel of ground, and good progress has been made with the driving. I had expected to have met with the first of the south lodes as marked on the old plat, but one cannot tell what variations there may be in the underlie. The present end is letting out an increased quantity of water, quite different from anything I have yet seen, so I cannot but think we are on the eve of meeting with something here. Driving by six men, at 5l. 5s. per fathom. Since the last general meeting we have sunk the engine-shaft 1 fm. 3 ft., driven on the course of the lode at the 90 and 100 ft. levels 20 fms., risen above the 90 fm. level 6 fms. 1 ft. 6 in., driven on branches 11 fms., cross-cut at the 90 and 100 ft. levels 31 fms. 2 ft., in all 70 fms. 6 in. About ten weeks ago we commenced to clear out an old adit in the western part of the mine, which is said to have been driven about 100 years ago far enough south to intersect the Bor Creek Marston, and other lodes, which come away west from Polladras Mine into this sett. Knowing that the Bor lode especially was rich in Polladras, and was worked in that mine at the 60 fm. level up to our boundary, I, therefore, considered it of the utmost importance that this adit should be cleared out that we might see how the lodes were bearing, and what indication they present in this sett, as we have a run of 490 fms. on the course of these south

lodes in what is almost virgin ground. We have already cleared out about 90 fms. of lobe and 46 fms. of the adit south, having to remove a depth of several feet of slime and debris, the accumulation of scores of years. At this point, 46 fms. from the north of the adit, we found a level going south of east on a caunter lode. We have cleared this about 50 fms. up to a choke, which is probably near an old adit shaft. How far it is driven beyond this point I cannot say yet, but we are clearing away the stuff as fast as we can, and I think it likely that the old workers continued the level until they intersected one of the east and west lodes, as we have found at surface to the south-east of this point some old burrow gossan with stones of mundic, &c. We have sunk a shaft to this level for ventilation. The adit is driven south beyond the caunter lode, and we have traced 6 fathoms further, but have come to another choke, which, however, we shall have no difficulty in removing, having found the level so far sound and firm. With regard to the future working of the mine, the sinking of the last 10 fms. has considerably improved the prospects, having brought us down to a settled channel of ground, in which the Margaret lode is more compact, and shows more tin than at any point above. It is my unqualified opinion that such a lode must further improve in depth. Before sinking another lift, however, I would recommend the 100 west be brought up under the 90, west of cross-course; when from the strength of the lode at that level, I believe the 100 will produce tin in paying quantities, and the appearance of the lode justify the resuming the sinking of the shaft. In the south part of the sett the adventurers have evidently a valuable piece of ground. The tradition of the neighbourhood is that the ancients with their rude appliances raised tin from shallow workings. As I expect the adit is extended a great way further south we shall soon be in a position to see how the lode can be advantageously worked. The ground is of a favourable character, and easy for exploring.

WEST OF ENGLAND MANGANESE COMPANY.

The statutory meeting of shareholders was held at the company's offices, Queen Victoria-street, on June 18.

Col. G. B. MALLESON, C.S.I., in the chair.

Mr. DUNCAN McDONALD (the Secretary) read the notice convening the meeting. Many shareholders were present.

The CHAIRMAN stated that active operations had been commenced on May 9, and that seldom in the history of any mine had work been pushed on so vigorously; the engine was upon the spot and would be set at work very shortly. He would call upon the managing director and engineer of the company, who would explain the plan of working in detail.

Mr. CURRIE GREGORY, C.E., informed the shareholders that though he had had confidence in the property at the starting of the concern, still that his confidence had been much strengthened by the way things were turning out. The shaft had already been sunk 66 ft., well-timbered throughout. The deep adit coming in from the low valley was being pushed on quickly, and as soon as the shaft and the adit cut one another at right angles the mine would be drained by a natural system of drainage, and the ore could be placed directly into trucks for transportation to the railway. The ground was already yielding 1 ton per fathom, which would pay the cost of stoping. He hoped in about three months time to have a good pile of manganese ready for market. One thing he could say with great confidence, and that was no mine could be worked with greater economy. No money had been spent in expensive erections, but all the necessary buildings had been erected at 7l. 10s. a year. Capt. Dodge, their mining captain, was a most experienced manager, and would make the mine pay well he was confident.

Mr. WALLER, a shareholder, asked if there was a ready market for the ore, and was informed that there was a most extensive demand for the article at good prices.

Mr. LORD suggested that a plan of the property should be exhibited at the company's offices, for any one who might like to call in and see it. Mr. SKEWIS, whose residence was stated to be quite close to the company's working, said that in a recent visit to the mine he was very much struck with the goodness of the ore turned out, and believed that kidney manganese would be met with. He thought the prospects very satisfactory.

Several other questions having been put and answered, a cordial vote of thanks to the Chairman brought the proceedings to a close.

SOUTH TOLCARNE MINE.

A meeting of shareholders was held at the company's offices, Austinfriars, on Thursday,—Mr. C. CLARKE in the chair.

The usual preliminaries having been disposed of, the subjoined report was submitted:—

Cambridge, June 23.—Since the meeting held February 16th last we have been steadily advancing the work of exploration in South Tolcarne Mine. The sinking of the engine-shaft, which was then down to the 60, has been for a time suspended, in order to cut a plot, drive the ends of that level east and west, and a cross-cut north. This work is now sufficiently advanced to allow the sumpmen to resume sinking the shaft, and it has been set at 18l. per fathom. The lode in the bottom is of a favourable nature; it is large and consists of iron, blue capel, with patches of granite, and containing a little tin throughout. The 60 end, east of shaft, has been driven 6 fms. on a lode from 4 to 6 ft. wide; it presents a very favourable appearance, and is not without tin at any point; it is letting out a quantity of water. A sample taken from a tin at Saturday last made a produce for tin of 33 lbs. per ton; this is worth nearly 1l. per ton, and would pay well to stamp had we stamps on the mine. The 60 end, west of the shaft, has been driven about 5 fms. on a lode from 10 to 12 ft. wide; it carries tin of low value, some of which we have saved. The cross-cut north has been driven about 9 fms. from the shaft through a series of branches of the lode. We have now in the end an elvan with seams containing mineral permeating through it; it is letting out water freely. The present favourable appearance of this end leads me to expect an improvement here. I consider the numerous branches passed through indicate that at a deeper level considerable deposits of mineral may be met with. The stopes east of the shaft, between the 40 and 50 ft. levels, and the rise above the 40, continue to produce tinstone, which is at times of rich quality. We have sold 73 tons 16 cwt. of tinstone, realising 118l., and have about 50 tons more broken in the mine, the value of which is about 50l. The machinery, pitwork, &c., are all in good order. I may add that I still entertain the same good opinion of the mine. I consider that the improved appearance of the lodes in the bottom, the evident increase in the quantity of tin in these lodes, and the favourable state of the levels in the adjoining mine (South Condarrow) driven on our boundary, all tend to prove that South Tolcarne will eventually become a very valuable property.—T. ASQUITH.

A call of 2s. 6d. per share was made, and it was resolved that, in consideration of the large interest held by Mr. H. Mackay in this mine (nearly one-half), and he having expressed a desire to have the secretaryship transferred to his own office from and after July 1, the books and business of the mine be transferred thereto, in charge of Mr. David Martin, as secretary, with the same remuneration for services (including use of office and furniture) as at present paid to Mr. Hickey. Further, in consideration of the long services of the present secretary, Mr. Hickey, for which the thanks of the shareholders were tendered to him, he be allowed three months' salary.

THE DEVON FRIENDSHIP MINING COMPANY.—A special general meeting of shareholders was held, on June 14, at the offices of the company, Austinfriars, Mr. Cook in the chair. Mr. J. H. A. Smith (the secretary) having read the notice convening the meeting, the Chairman explained that the meeting was purely a formal one, being simply to confirm the resolution passed at a previous meeting. He, therefore, moved the confirmation of the following resolution:—"That Clause 88 of the Articles of Association be altered as follows:—'No person shall be eligible to the office of director unless he shall have been for three months the registered holder of at least 200 shares, and no person other than a retiring director, without the assent of the board, shall be eligible to supply the place of a director retiring at any meeting unless he shall have given to the company notice in writing of his intention to offer himself as a candidate at least one month previously to the day of election. A retiring director shall be deemed to offer himself for re-election except when he shall give to the company notice in writing of a contrary intention.'" The motion was seconded by Mr. Wilkin, and carried unanimously. A vote of thanks to the Chairman and directors terminated the proceedings.

CAPE COPPER MINING COMPANY.

The report of the directors, prepared for presentation at the meeting on Monday, states that the value of the ore and metal returned during 1880 was 286,677l. 8s. 8d. The ore averaged 29½ per cent., and the average price obtained has been 12s. 1½d. per unit. The costs were 174,806l. 10s. 4d. The result is a net profit for the year of 111,870l. 18s. 4d., which, with the balance of 25,155l. 0s. 11d. from 1879, makes a total of 137,025l. 19s. 3d. Of this 80,000l. has been paid in dividends, 2016l. 7s. in income tax, 3500l. has been carried to the landed estates and buildings sinking fund, 2000l. to the stocks, plant, and machinery guarantee fund, 5000l. to the railway and jetty sinking fund, 2000l. to the mineral rights and inferior ores sinking fund, 1000l. to the smelting works sinking fund, and 10,000l. to the reserve fund, leaving a balance of 31,809l. 12s. 3d. to be carried forward, out of which a dividend of 20s. per share has been declared. The directors have considered it desirable to add these amounts to the various sinking funds and to the reserve fund, as the large profits of the past year have been partly obtained from an exceptional source, the improved means or dressing established at the mines, referred to in the last annual report, having led to a large quantity of the surface reserves being brought into marketable condition, and the amount of the monthly returns from Ookiep having been considerably increased.

The quantity of ore obtained from Ookiep Mine and the surface reserves amounted for the year 1880 to 14,546 net dry tons. The reserves of ore underground at the close of that year are stated at 39,356 tons, being about the same quantity as stated at the end of 1879. No material alteration has taken place in this mine during the past year. The various points have been laid open with care for future economical working. The proper ventilation of the mine and the arrangements for trimming the orestuff have received careful attention. The stopes have yielded satisfactorily and continue to look well.

The development of Spectacle Mine has progressed fairly, and although dressing was much impeded during a portion of the year owing to a short supply of water increased returns have been obtained and the mine worked to a profit. It is a satisfactory feature at this mine that the agents, for the first time for many years past, are able to report a fair extent of reserves at the close of the year. The water supply has been improved and rendered more regular and permanent by means of pipes carried to the bed of the Buffels river. The return from this mine for 1880 amounted to 1163 tons.

As to the Trial Mines there is nothing material to report of the work at these

points, except that a new trial has been commenced at Springbok; but which has not yet sufficiently advanced to give any decisive result.

In the last annual report it was stated that the company had acquired the lease of the Briton Ferry Copper Works for the purpose of treating a portion of the company's produce. Considerable success has been obtained by means of these works. Charging to the account, for the ore treated at the works, prices based upon the same margin between ore and metal has ruled for many years, the profit obtained by smelting about half the company's ore during the past year is equal to the total sum paid for the purchase of the works. In view of the success which has thus attended the smelting of a portion of the company's ores, the directors have decided to erect some additional furnaces, and it is hoped they will be completed in a few months.

The railway accounts for the past year show improved results. Larger quantities of materials and ore have been carried during that period than in the previous year, and at a less cost. At Port Nolloth the work in the shipping department has again been effected satisfactorily, and the vessels have been discharged and loaded with great dispatch and regularity.

THE MICHIPICOTEN NATIVE COPPER COMPANY.

The company has received the following report from Capt. Opie (late of South France), their agent at the mine:—

May 18.—We arrived at the Michipicoten Island on May 11 at midnight, after being detained about two days with fog, &c. I am pleased to state that we are all well. We crossed the island the next day, conducted by Mr. Stuart. We found the journey very tedious and irksome, the trail being filled with ice and fallen trees. The following day we commenced at the mine to draw out the water in office shaft, repair roads, and clean houses to board in. We have forked the water, and inspected this part of the mine underground.

The shaft is sunk 10 fms. from surface, and is anything but good as a shaft, it being small and crooked. The end east is driven 48 ft. on a small portion of the lode. The greatest part, and no doubt the best, is to the north of this level; we purpose to put a pair of men in this end to cut through this lode and ascertain its worth. The western end is driven 6 ft. from the shaft; here also the part driven on is small, but rich for copper. The cross-cut is driven north 62 ft.; the first 3 ft. is through No. 1 lode; from its appearance I should say that it will produce good stamping work. No. 2 lode is cut through 10 ft. 6 in.; it size we cannot state, as there is no north wall to be seen. From its appearance and size there is no question but that it will pay well if there are proper appliances for drawing and dressing. I have travelled over 4½ miles of this island (Mr. Phillips' location included), and found 12 shafts sunk in this distance. The three lodes can be traced most distinctly. They are very large and well defined, and no doubt to me that they will be found rich in depth, as the two lodes seen in the bottom levels are much better than at surface. If these lodes had been in England there is no doubt but that the whole island would have been thoroughly explored. I consider it the best speculation that I know of, and think it a property that no mine adventurers need be ashamed of.

You will see by a glance at the plan that all the shafts are put as near as possible to the lake, so that there is no fall for us to put up our machinery to the best advantage. For a thorough development and the future prosperity of this mine, and the dispatch that the stuff requires, I see no alternative but to go south 50 fms. of No. 1 lode, and put down a new shaft, say 15 ft. long by 7 ft. wide, and to sink it with all possible speed. When down at a convenient depth cross-cut north and intercept the three lodes. Also drive south and cut the lode that is seen in the cliffs known to run for miles in that direction. In the meantime we shall put men to work in the old shafts to get a proper supply of stuff for our mills while they are being put up. Every effort will be made to put down the new shaft as quickly as possible, and get work for the continued supply of our mills.

After much consideration I think we are fully justified in an outlay of money in putting down a new shaft and erecting machinery, as the prospects in connection with this mine are very good. I have consulted Messrs. Mitchell and Stuart on the future working of the mine, and explained my views of operations to them, and I think that they fully concur with my plans. No doubt, Mr. Stuart will write you on the subject. I found the island much more pleasant than I expected. It is very healthy, and is well watered. There is a good well-built pier, the landing, with a good house on it kept as a store-house. On the mine side there is a good and large house provided for the farm. In connection there are two large, well-built, commodious barns, every way suitable for the farm and cattle in the winter season. Also many other houses for pigs, fowls, &c. Inventory is being made of the farm stock, implements, &c., which will be forwarded as soon as possible.—JOHN OPIE.

FOREIGN MINING AND METALLURGY.

There is little news to communicate with respect to the Belgian coal trade. Considerable deliveries of industrial coal continue to be made; but, on the other hand, domestic qualities meet a slow sale, especially in the Mons basin, and there are complaints as to the competition of French coal. French railway companies are making important tariff reductions wherever there is a chance of French coal supplanting Belgian coal, and it is affirmed that Belgian coal is losing ground in consequence from day to day. Stocks of coal are being formed at some collieries, but only of certain qualities coal quotations are not supported, upon the whole, with any very great firmness in Belgium. A second adjudication of coal for the Belgian State Railways will take place shortly.

A rather more cheerful tone has characterised the Belgian iron trade. At the same time there has been no rally or improvement in prices. Enquiries are numerous both on home and foreign account; they appear, indeed, to be increasing from day to day. Less difficulty is also experienced by producers in coming to an understanding with consumers in the important matter of prices. No upward movement can be anticipated in prices at present, as too many works are eager to catch up the least affair offered, and to accept also comparatively unfavourable terms. Transactions have been concluded on various sides, and a good Charleroi house is stated to have been under the necessity of refusing in consequence a rather important order. Upon the whole work does not make default, but still many establishments are only employed from day to day, and industrials would be glad to be in a more certain and assured position as regards the future. Pig has been supported with a little more firmness, and at Charleroi there has been some symptoms of a revival in the demand. The basis prices of iron in Belgium may still be given at about 47. 16s. per ton, the scale for number being 8s. per ton. Plates are currently dealt in at 67. 8s. to 67. 12s. per ton, some of the more favoured works making 67. 16s. per ton. The German construction workshops appear to be pretty well satisfied with their position. A contract for 500 locomotive tyres has been obtained by the Rhine Steelworks at 107. 15s. 9d. per ton. Krupp, of Essen, has secured an order for 1125 carriage axles at 127. 10s. per ton.

In the Haute-Marne (France) business has not by any means lost its animation, and both forges and foundries are in full activity. The current orders received are almost sufficient to keep the works going without the assistance of old contracts, which are being only slowly worked out in consequence of the pressure of new business. Prices have remained at about the same level as hitherto. Coke-made iron has been quoted at 77. 12s. per ton, and mixed iron at 87. 8s. Some orders for sheets have been received. Wrought iron and axles remain without change; the demand for some descriptions of axles is urgent. Ordinary plates remain at 97. 12s. per ton. Castings for ornaments and building purposes have never been in more request; the foundries can scarcely meet the demand. There is only one black spot in the horizon of French ironmasters; we refer to the great development of new steelworks. The Longwy Steelworks can alone produce 100,000 tons of steel annually, and it is feared that such a considerable production in this case and in other instances will lead to a certain disturbance of the iron markets. The tone of the German iron trade has not varied materially during the month which has just elapsed. Prices have generally remained at about the same level, and hopes are entertained of some improvement in business during the second half of the year.

THE MINERAL WEALTH OF THE CAUCASUS.

A Russian correspondent, dating from Kertch, Crimea, May 16, draws our attention to the lead, silver, and zinc mines and works in the Caucasus, which have at present been under fiscal control, but which the Russian Government desires to hand over to private parties. Letters written in January and February of this year contain the following particulars on this matter:—

"The Russian Government desires to let or sell its silver, lead, and zinc mines and works to the right people at quite a nominal rental or price. The works are situated about 16 to 15 miles from a railway station, and have been going for about 16 years. All the necessary buildings are in splendid style, there is a large and experienced staff of working men on the ground, and unlimited water-power. The extent of the deposits is enormous, and extends for miles and miles. It is a decided wish of the Government to encourage mining enterprise in the country, and it will hand over the works to such people who can give sufficient guarantee that the mines will be worked and extended. Any quantity of mineral may be bought also on the spot, gathered by the natives. The Government only extracted the silver and lead, and the zinc was thrown away. There are now several million of pounds lying in the river waiting the right people to work them. The whole business can be had on a long lease at quite a nominal rental; in fact, the officials told me officially that the Government would turn the mines over to the right people for working, of course provided those people could work the establishment in the proper way and extend the mines. It is the beginning of a new policy industrially on the part of the Russian Government. The Government has found out by practice that it is not a merchant or an engineer, and in consequence thereof meets with a yearly deficit in the concern of some 16,000 roubles. But the Government will not lose the result of almost an enormous capital in-

vested for the last 20 years in these mines. In an indirect way—that is to say, it must be so secured that the necessary funds are at hand to work the mines properly, and that local mining enterprise will become a serious impulse for the benefit of the country and its inhabitants. On such conditions the Government will accept any terms for royalty, say 5 kopecks a pound, or a rental of a few hundred pounds a year—in fact, anything you might suggest. The Government trading capital was yearly 120,000 roubles (12,000 £), for which it got about 10,000 pounds of lead and 100 tons of silver. The zinc was thrown away, and there are now millions of pounds of zinc ready for smelting lying near the works. As for the richness of the mines I must say that the formation extends for upwards of 100 miles. Further, the people who secure this business will place themselves in a first-class position towards the Government for obtaining an almost exclusive monopoly in mining operations. The Government takes all the silver and the lead on the spot at ruling prices. A German company and another party are after this concern, but the Government has not sufficient confidence in either of them, or their ability to work the mines properly."

The above mines are fully described in an "Aperçu des Richesses minérales de la Russie d'Europe," which was published in Paris in 1878.—Iron.

THE DISCOVERY OF THE INDIAN GOLD MINES—WHO IS TO HAVE THE PROFITS?

An important action—Harris against Fleming—for establishing the right of Mr. Edwin Harris to one-third of the profits to be derived from the working of a considerable portion of the auriferous deposits of the South Wynaad District has been before Vice-Chancellor Hall, in the Chancery Division of the High Court of Justice during the week. The plaintiff was represented by Mr. Graham Hastings, Q.C., Mr. Meadows White, Q.C., Mr. F. C. T. Millar, Q.C., and Mr. Warrington. The defendants—the Indian Gold Mines (Glasgow) Company, William Nicol, and Co., Smith, Fleming, and Co., and others—were represented by Sir J. Holker, Q.C., Mr. Benjamin, Q.C., Mr. Horace Davey, Q.C., Mr. W. F. Robinson, Q.C., and Messrs. Everitt, G. Woods, C. Healy, F. Whinney, and McClymont.

Mr. Graham Hastings, in stating the plaintiff's case and laying the numerous documents before the Court, said that the correspondence on the one hand was chiefly between Mr. Harris and Mr. Matthew Morton, who acted as intermediary between Harris and Nicol, Fleming, and Co., Bombay, and on the other between Mr. Maxwell, representing Wm. Nicol and Co., and Mr. M'Ilwraith on behalf of Smith, Fleming, and Co. The question at issue was the share of profits claimed by Mr. Harris; and Mr. Hastings, in the course of the correspondence which he produced, read a letter of date April, 1877, from Morton to M'Ilwraith, in which he said:—If you have any speculative friends, there is room for them in India, which will turn out a second California. Several specimens of quartz were enclosed, and Mr. M'Ilwraith in reply suggested the possibility of the bits of quartz being Australian, and that the promoters might be anxious to get a little money out of a confiding party. M'Ilwraith added that he did not think they need trouble themselves about the matter, and that as to the rubies and diamonds that had been sent him they were nothing of the sort. M'Ilwraith seemed afterwards to have formed a different opinion of the reported discovery. The samples of quartz had been examined by an expert, and M'Ilwraith telegraphed to Morton to inform Wm. Nicol and Co. that the report was favourable, and to keep the matter secret. Subsequently Smith, Fleming, and Co. wrote to Wm. Nicol and Co. saying that they had been taken to see the gold reef, and adding, "if all be true we may all die rich yet. If all right don't fail to telegraph 'Excelsior.'"

In the meantime Morton called on Maxwell and gave him a general outline of the discoveries made by Harris. On the 14th Morton saw the plaintiff and told him he was prepared on that evening to introduce him to capitalists of whom he had spoken to him. Accordingly Harris and Morton went to Maxwell's house, and Harris then knew for the first time who the capitalists were—the well-known firm of William Nicol and Co. In considering what took place at that interview, it was important to bear in mind what had been in the minds of all parties. The next step of Mr. Harris's counsel appeared to be to establish the fact that Mr. Maxwell well knew what he was about, and that the secrecy which now seems an obstacle to Mr. Harris was maintained at the instance of Nicol and Co.'s representative. Mr. Graham Hastings continued that Maxwell had been told by Morton that the discoverer could go into the venture only on the principle that he should have a share in the profits. Furthermore, Maxwell, who was an old gold miner, was well aware of the practice that mines were always taken in shares in this way—that was to say, equal shares. No doubt from the pleadings there was a difference as to what exactly passed at the interview. The statement of the plaintiff was that after some discussion as to the general character of the mine an agreement was entered into, subject to the fact that Mr. Maxwell should have a few days to consider the matter. The arrangement was that Wm. Nicol and Co. were to find the necessary capital for buying up the mining rights in the Wynaad district. The profits were then to be divided in equal shares—that was to say, between the plaintiff, the discoverer, Morton (as the person who had brought the two parties together), and the firm of William Nicol and Co., who were to provide the capital. Of course, the profits could only be ascertained after paying the purchase-money of the properties and all expenses which would be properly charged against the joint venture, and it was simply what remained that was to be divided between the parties.

There appears to be no dispute between the parties that Harris was to proceed forthwith to prospect the mines, and that Harris distinctly refused to act as an employee of Nicol and Co., but the dispute as to whether any formal, although parole, agreement was ever made between Harris and Nicol's representatives, or whether Harris consented to rely upon their generosity in futuro. Harris contends that there was an agreement. His counsel urged that it was clear that the parties were agreed on one thing—that the plaintiff had distinctly refused he should be paid by way of salary, and that he would only enter into the matter with the firm of W. Nicol and Co. upon the footing of his receiving a share of the profits. This was denied in the pleadings, but there was a letter from the only person that could know anything of the business, and that letter was conclusive that the plaintiff distinctly refused anything other than a share of the profits. That being arranged, Maxwell said, "We must not be known in this matter at all. It would be an awkward thing if it were known that Wm. Nicol and Co. were dabbling in gold mines." An arrangement was accordingly made that Morton was to be the medium of communication between the plaintiff and Wm. Nicol and Co. Every letter that was written by the plaintiff to Morton from that date was, therefore, to be treated as if it had been a communication by the plaintiff to the firm of Wm. Nicol and Co. direct. There was also a communication between the plaintiff and Morton for the purpose of communication between himself and the plaintiff. This was also shown by the answers to the interrogatories of the plaintiff, where it was stated that the registration was in the plaintiff's name for convenience, and in order that it might not be known that Wm. Nicol and Co. were engaged in any mining operations in the district. The arrangements to which he had referred having been made, the plaintiff on May 14 gave Mr. Maxwell the fullest details of the discoveries he had made, and the plaintiff signified his readiness to start for the district at once. On May 17 Maxwell again saw the plaintiff, when Maxwell confirmed the arrangement, and said he would give the plaintiff 500 rupees for expenses to start at once.

Another point upon which there is no dispute is that Harris received the 500 rupees by Nicol's cheque on May 18, and that on the day following he started for the Wynaad district. His counsel then quoted letters which were written home to England by Maxwell. One describing the interview with Harris and Morton stated that Morton warmed up under the influence of good claret, and at last he did not care a brass farthing for the gold; all he would like to see was copper and tin. This letter added that Harris asked no wages, but in the event of the venture turning out well he expected a share. In another letter written to Mr. Fleming, Maxwell stated that he quite believed in the man Harris, whose personal name was to be known as Harris who discovered rich reefs in India. He added that he should soon have a few cuts of quartz, and hoped soon to advise being able to grab the Seeputee estate. This part of the correspondence did not say what share Harris was to have, but it was at all events a share, and he (the counsel) took it that the share was to be according to the ordinary practice. The absurd alternative put before the Court was that Harris was to receive nothing. Could they conceive that this man was going to put the defendants in possession of his discovery which was to make them rich beyond their expectations, and was to get nothing? The rule of the law as well as of practice was that when parties went into a joint venture, if there was no stipulation as to particular shares, the shares should be equal. If the share was not to be equal, was it to be supposed that they were to go on negotiating for all time until they could agree upon the precise amount the share was to be, and in the meantime the defendants were to take all? They practically said that "you who have been the means of giving us all these millions—because in fact it was a matter of millions—are to be left out in the cold, because it was not finally arranged what the precise share is to be." Mr. Hastings next read that branch of the correspondence dealing with the negotiations for the acquisition of the properties, and as to the proceedings of Harris in the Wynaad district, also letters between the London and Bombay firms in respect to the shares proposed to be given to Morton and Harris for their interests in the venture. M'Ilwraith wrote to Maxwell stating, "God grant that it may turn out well, and whatever the shares, it will make us all comfortable." Maxwell, in a communication to M'Ilwraith, said "I have not said a word to Morton about the share in this case beyond saying that if it turns out well he and Harris will certainly get a small share. Supposing I was to say two annas (or one-eighth of the profit) Morton would get more than myself, which I don't think would be right. Harris is different, and would be well entitled to what I may give him. I would grudge Morton getting more than I do." The correspondence next quoted showed the return of Harris and Morton to England, and both were there when in October, 1878, the City of Glasgow Bank failed. Smith, Fleming, and Co. thereafter failed for a very large amount, and went into liquidation with Mr. Harding as trustee. William Nicol and Co. also went into liquidation. In regard to the Indian gold mining properties, the first intimation that Harris received that anything was being done was a notice from Mr. Harding in regard to the transfer of the mining estate to the trustees, that estate being dealt with as the exclusive property of Wm. Nicol and Co. The Seeputee mines were in the name of Mr. Harris, and a conveyance was asked from him. Mr. Harris's solicitor wrote stating that a deed was to be executed to the effect desired upon due provision being made for his share of the profits. After referring to the position of the several defendants, the learned counsel concluded by remarking that three of the defendants were partners of the firm of Wm. Nicol and Co., and whatever benefit Wm. Nicol and Co. would have would pass to Mr. Harding. The Indian Gold Mines Company had claimed to have an assignment of the mines to them, and to that there could be no objection. The point was whether the plaintiff was entitled to share the profits of the mining rights. The plaintiff had such a right; and if that was so, it had been the practice of the Chancery Court that the party claiming was to be ascertained by proper enquiries. As regarded the Seeputee and two other mines there could be no doubt; and as to the others, if the rights were bought up after plaintiff left India, it was upon the terms of the agreement with the plaintiff upon which Nicol and Co. operated, and under which the plaintiff was to share equally. He, therefore, asked the Court to make a declaration that the plaintiff was entitled to one-third of the net profits after deduction of the outlay and expenses incurred in the venture.

Mr. Edwin Harris, the plaintiff, was examined in support of the statements made by his counsel, and afterwards cross-examined by Sir J. Holker, but in

the cross-examination nothing material was elicited, the chief object of Sir John Holker being apparently to ascertain Mr. Harris's experience of mining matters in California and Australia. The hearing will be resumed this (Saturday) morning.

Mining Correspondence.

BRITISH MINES.

ASSHETON.—J. Garland, June 22: The 60, east of boundary shaft, was driven last month 3 fms. 4 ft. 6 in.; the lode is getting larger, being now 3 to 4 ft. wide, and carrying a good deal of blende, with good lumps of lead ore irregularly disposed throughout. A considerable quantity of water issues from the lode. The driving has been reset for the month to four men, at 74. per fathom. The 92, east of boundary shaft, was extended 3 fms. 2 ft.; there is little or no lode in the end; total distance driven, 18 fms. 3 ft. The driving has not yet been reset. BEDFORD UNITED.—R. Goldsworthy, June 22: There is no change in any points of operation or the Bridge or north lodes to call for any special remark since last reported on, the value in each case being the same.

BLUE HILLS.—S. Bennetts, R. Harris, June 18: The lode in the 80 east end is in two parts, and worth 67. per fathom. In the 42 east, the cross-course has not yet been reached, and the lode producing some tin stuff but not of much value. In the 30 east it is worth 147. per fathom.

BODIDRIS.—H. Hotchkiss, June 22: Meadow Shaft: The 130 cross-cut south is being pushed forward through highly mineralised rock, wherein is a fair mixture of spars. We are out now about 11 ft. from where we intersected the hanging portion of the lode; about 6 ft. further driving here should prove this. It will be remembered that when we first intersected this lode in the 60 cross-cut it was found to be 16 ft. wide, and I am of a strong opinion that the footwall, or south portion of lode, has not yet been seen in the workings near the Meadow shaft, so with that in view I shall continue to urge this on with all speed. In the 110 cross-cut north since my last we have passed through two small strings of lime spar, which were dipping north, or towards the lode; this being the only change here we are this week fixing a back signal in this shaft. In the eastern workings the 60 is without material change, producing saving stuff for the dressing-floors, the best being near the sole of the level. I have commenced an underhand slope in the bottom of this level, as near the forebreast as convenient; the lode looks very kindly here, and the lead ore is more in a solid state, and has every appearance of becoming stronger as we go down.

BWLCH UNITED.—W. Northey, June 22: In the 50, east of the fault, the lode is divided, and I have placed the men to further test the south part of the lode, which contains patches of good lead, mixed with quartz, &c. The 30 cross-cut has intersected a good wall running east and west, but underlying north, carrying a little quartz; the rock is rather hard for driving, but favourable for producing lead ore. In the 12 under adit I am pleased to say that on Tuesday last I communicated to the old workings with a borehole in the bottom of the level, and have placed the men to sink, and hope to get through communication in a week or nine days. The men are busily engaged in laying the railroad in the 30, and making passes from this level to the 50, to receive the lead ore from the slopes in the back of the 30, &c. Marvin's lode, 15 fms. under adit, has greatly improved in value since I last advised you, although not quite so wide, but more productive for lead ore. I am coasting on a strong lode, and have proved the lode for 100 yards in length. In No. 3 pit I came on old workings. I intend to fix a tangle and clear it to the bottom. The lode in the end is strong, and has kindly appearance. The surface men are busy in clearing out the wheel-pit, &c., and the carpenters are preparing timber for standing, &c., for the new line to work the new jiggling machine. Dressing is kept going in full speed, and the machinery working well.

CALLINGTON CONSOLS.—Thomas Gregory, June 22: We have resumed the sinking of Foakes's engine-shaft below the 45, by nine men, at 177. per fathom. The ground is favourable for progress, and congenial for mineral, with small veins of copper ore interspersed, and is altogether exceedingly good. The 45 east is set to four men at 57. to drive for one month or cut the cross-course. The lode is by the side of the same. It will, however, be cut into as we go on from time to time for proof of the same. In the trial shaft sinking on the silver lode the lode is over 2 ft. wide, composed of quartz, gossan, and strong muddle, which contains some silver and copper ores, with a very promising appearance.

CARN CAMBORNE.—R. Southey, W. C. Vivian, June 22: The engine-shaft sinking by nine men, at 307. per fathom, is now within about 9 ft. of the 105, where it is proposed in the first place to drive a cross-cut to the north lode, which we calculate is distant about 7 fathoms; there were large runs of copper ground on this level westward from the shaft, one of which has been worked down to the 105. We hope to find the lode equal to the cross-course, distant, the one east into the untried ground towards the eastern cross-course, and the other about 70 fms., and the other 100 fms. There are chances for making fresh and valuable discoveries westward, also under the ore ground which was met with at the shallower levels. To reach the lode at this level and begin to open it out will probably take four months more, as the granite rock through which we are sinking is harder than we expected to find it. The 60 is being driven east of the engine-shaft, on the north lode, by four men, at 157. per fathom. We are looking forward to a discovery at this level on getting nearer to the cross-course, in the lode, distant about 20 fms. At the 40 we were putting up an exploring rise on a south part of the south lode, immediately west of the silver lode the lode in the central part of the mine, were large bodies of copper were found in the past working. This south part appears to be going up to the south of the lode hitherto worked upon in the back of this level, and it is improving; the lode being now 2 ft. wide, and producing about 2 tons of copper ore per fathom. In this rise we have four men, at 77. 10s. per fathom. We have also two men driving the 40, east of the cross-course, on the same south part of the lode, which has been referred to, the price being 97. per fathom; in this end there are two or three seams of lode, some of which look very favourable appearance, and are producing a little copper ore. The 40 is also being driven south on the cross-course alluded to, by two men, at 27. 15s. per fathom; the object being to find any lodes or branches which may possibly traverse our south ground, and which we should here intersect parallel to the runs of copper met with in the lodes already explored. Two men have also been placed to open out at the 30 with the same objects as those which we have in the operations alluded to in the 40. We think this mine offers excellent prospects for becoming one of the best of the locality in which it is situated if well developed. For a more detailed expression of our ideas or the general features of the property we would beg to refer to our prospectus published to you on April 1st last.

CARNARVON COPPER.—J. Roberts, W. Darby, June 23: The sump at the 80 is improving a little to-day. Their is a fine patch of very rich copper ore in eastern end, which we believe will open out wider and longer as we go down. The water has increased a little, which makes it more spare for sinking. The 90 end is not quite so good as it was, except at the bottom, where there is still a splendid lode. We value it at 187. per fathom. It appears that between this and the sump that the lode has made a splice, as the copper at the 90 is close to the hanging; but in the sump at the 80 it is nearly on the footwall.—2.30p.m. (W. Darby): The 90 end has greatly improved since yesterday, and after the main blast this morning, the end looks better than we ever saw it before.

CATHEDRAL CONSOLS.—Stephen Davey, June 21: Our progress in forking the water is exceedingly good, 6 ft. below the 30 fm. level last night, and find the 12-in. bucket lift so far in good order.

CROOK BURN.—Jacob Craig, June 17: There is no change in the north cross-cut since my last. The rise from south cross-cut is now up 4 fms., and we will commence to cut through the vein as soon as we get the engine started, and the water out of the mine, which has collected owing to the engine being stopped while winding gear is being attached to it. This will be done in about a fortnight, when operations will be at once commenced.

DENBIGHSHIRE CONSOLIDATED.—Francis, R. Prince, June 23: We have much pleasure in reporting that the lode out of the 112 cross-cut continues to improve steadily, and is now worth about 2 tons of lead to the fathom. In addition to the full set engaged in driving the level, we have set six men to slope to the back of the level at 57. per fathom, and as the lode is worth at this point 1 ton of lead at least to the fathom, it will be seen that this operation will also be remunerative to the company. The tribute bargains in the 112 main lode are yielding as for some time back. We can now report that all our operations are paying. We have sold to-day 9 tons of ore, at 97. 5s. per ton, and our returns will now be much larger.

DERESBY MOUNTAIN.—J. Roberts, W. Sandor, June 22: During the past month we have had a great deal of work at the No. 5 in taking away the part of the lode and securing the ground to make it safe for working. We have now opened a great length and some height on the lode, which have made a great advantage for breaking through it and sending to surface large quantities of stuff, and we are glad to say that the slopes have improved in value to what they had been for some weeks. The No. 6 end driving on the heading during the month has very much improved in value, and we have never seen the lode look so good as it is at the present moment, and we believe still that we shall be well repaid for our perseverance in driving the cross-cut, though the lode and containing this end in the direction we are driving. We do not know how wide the lead-bearing part of the lode is here, as we are leaving lead still to stand on the slide towards the hanging, but as soon as the end is advanced a fathom or so more we shall put men to open the side and rise up in the roof for a fresh stop of lead. On account of the debris from the shaft falling down into the watercourse we have to divert it and carry it for some distance in launders. These launders we are fixing, and shall finish them as fast as we can. They will hinder no time with the crusher. The dressing is being pushed on as fast as possible after having done a great deal of repair to the crusher.

DEWENT.—John Morphet, June 21: The following is the setting report:—Jeffries's Shaft—Middle Vein: The 95, on middle vein, east of the shaft, is worth 25 cwt. of ore per cubic fathom, or 1 ton 17 cwt. for full width. The flats in this level, on the south side of the vein, are producing 1½ ton of ore per fathom. Over this level the three slopes are yielding 12, 14, and 14 cwt. of ore respectively; the vein is 4 ft. wide. The slope over the 93, west of the shaft, yields 13 cwt. of ore; the vein is 4 ft. wide.—Westgarth's Shaft—Middle Vein: On this vein, in the 93, we have two slopes, one yields 10 cwt., the other 13 cwt. of ore per fathom; the vein in these places is 3 ft. wide.—North Vein: The 93 east, from the rise opposite the shaft, is 4 ft. wide, vein is promising, and except for about 2 ft. high from the bottom the end contains nice ore, worth 14 cwt. per fathom. These remarks apply to the same level west, which is 4 ft. wide and worth 14 cwt. of ore per fathom. The slope in the back of this level has improved; the vein is 4 ft. wide, and yielding 20 cwt. of ore per fathom, but is more costly to shift than we had anticipated. In the 79 cross-cut we have not much change, it was driven last month 4 fms. 5 ft. 8 in.; we have reduced the men to four. We have placed a couple of men to rise in the back of this cross-cut, upon a vein we passed through, which although not rich it has some prospect of ore per fathom; its present worth is 13 cwt. of ore per fathom. At the 2 ft. wide. The vein over the 74, where we are driving westward, the rise, at the junction of the middle and Burnfield's Haugh vein, 220 fathoms west of shaft, is 2 ft. wide; it is worth 16 cwt. Machinery working very well.

DEVON FRIENDSHIP.—Charles Thomas, June 21: I now send you report of our work at Friendship in detail. The adit end is improved, and will now yield 8 tons arsenical muddle per fathom. The slopes in back of the adit are yielding the usual quantities of arsenic. The new shears and shaft tackle at Bennett's are complete. The Robey engine with steam capstan attached is in order and commenced hauling for first time on Saturday. This will effect saving in horse hire of fully 100. per month. The cauldron is working well since the new stack has been constructed with the 3-ers, and we hope to complete delivery of

Mr. Field's second 100 tons of arsenic in latter part of next week. The breakage in the stamps wheel hindered us in our returns of tin for several weeks, but by continuing our stamping some four weeks longer we can get about 8 tons ready still. The masons are exceedingly busy building stands for water-wheel, bobbitt, holdback, bob, &c. These will take us four or five weeks to complete. In the meantime we are making enquiries concerning the refining works. Seeing that we are now in good working order at the mine, do you think it will be advisable for me to send a monthly report to the *Mining Journal* in future? If so please let me know.

DEVON GREAT CONSOLS.—Isaac Richards, June 23: Wheel Josiah: In the 144, east of the Court House shaft, on the new south lode, the lode is 3 ft. wide, composed of capel, quartz, and small quantities of copper and munda ore. —Wheal Emma: Inclined Shaft: At the 130 east the north part of the new south lode has been cut into 3 ft., and so far as seen it presents a very promising appearance, being composed of capel, quartz, peach, munda, and some good quality copper ore. In the 137, east of Friend's cross-cut, the lode continues large, from 5 to 6 ft. wide, of a very promising character, producing some saving work of copper and munda ore. —New Shaft, New South Lode: In the 205, west on the north part of the lode, the lode is 4 ft. wide, composed of capel, quartz, peach, and some good stones of copper ore and munda worth 2 tons per fathom. In the 115 east the lode is 2 ft. wide, composed of capel, quartz, peach, and some copper and munda ore. In the 103 fm. level east the lode is 1½ ft. wide, composed of capel, containing a little of both copper and munda ore. In the 30, east of the lode is 2 ft. wide, of a promising appearance, producing some copper and munda ore. —Railway Shaft: In the Railway shaft, now down about 14½ fms. below the 190, the ground continues favourable for progress and congenial for mineral. In the 190 west, on the north part of the lode, the lode is 3½ ft. wide, of a promising character, and producing good stones of copper and munda ore. In the 175 west, on the south part of the lode, the lode is 4 ft. wide, containing some good copper and munda ore, and its general character is of a very promising nature. In the 160 west, on the south side of the lode, the lode is 1½ ft. wide, composed of capel, quartz, with small quantities of copper and munda ore. In Rich's winze in the bottom of the 160, west on the south part of the lode, the lode continues of good size, from 4 to 5 ft. wide, and worth 5 tons of copper ore and 3 tons of munda per fathom. —Watson's: In the engine-shaft, sinking below the 76, now down 8 fms. 4 ft., tolerably favourable progress is being made, and the ground continues congenial for mineral.

DEVON GREAT UNITED.—I. Richards, June 23: I am pleased to inform you that the Plunger lift at the 93 in Willford's shaft has been fixed and set to work, and the water has been drained to the bottom, or 104 fathom level. The men will now get on as fast as possible with laying skip-rod, casing and dividing the shaft, and putting in good and permanent footway to the bottom of the mine. In the 60 west of Willford's shaft, on the Capel Tor lode, the lode is 2 ft. wide, composed of capel, quartz, peach, munda, and good stones of copper ore. In the 50 west of Watson's shaft, on the Capel Tor lode, the lode is 3 ft. wide, composed of strong capel, quartz, peach, and some very fine munda and copper ore, and promises improvement.

EAST BLUE HILLS.—S. Bennetts, June 23: The adit level is being cleared eastward as fast as the stuff can be got away. At the 30 the end breast of ground has been reached; about 10 ft. above this level, however, the lode is taken away still further ahead. In the whole ground thus found the lode is 2 to 2½ ft. wide, of a most promising appearance, and although the old workings naturally took away all the best tin ground they could get at, yet the lode now found standing and laid open will most of it pay to take away, and worth 7½ per fathom. So far as can be at present ascertained, the good tin ground laid open, and from which those old tributaries were prevented from working by means of the falling in of the side, is some 10 fms. ahead of the most easterly point yet cleared at the 25, and this point we hope to reach in the course of another fortnight should no unforeseen obstacle be in the meantime encountered.

EAST BOTALLACK.—Geo. H. Eustice, John Hollow, June 23: The sinking of the engine-shaft goes on well, the men having sunk nearly 6 fms. since the commencement of their contract. The lode in the shaft is increasing in size and is of a more kindly nature for the production of tin. We have commenced clearing up a shaft on the south lode, adjoining the Baleswidened Mine, now down about 4 fms. Nothing has been done in this part of the mine for at least the past 50 years, but judging from the extensive workings on the back of the lode we should think it must be of a very promising nature.

EAST CHIVERTON.—R. Southey, June 23: The lode in the 90 end, west of the engine-shaft, is equally as good as when I reported last week, and judging by its nature to-day I am of opinion it will further improve as we extend the end of the level towards West Chiverton.

EAST HERODSFOT.—T. H. Bennett, June 23: We continue to make good progress with the cross-cut adit towards Beves lode, and every effort is being made to get forward to the intersection with all dispatch. We are passing through a very genial stratification for the production of silver-lead ore, and are hopeful of good results on reaching the lode.

EAST LONG RAKE.—N. B. Vercoe, June 22: The lode in the 50 east continues about 3 ft. wide, of clay, lime-spar, and lumps of lead; an exceedingly promising lode, and likely to improve. The rise in the roof of the 50 east produces saving stuff for the dressing floor. The lode in the 50 west is 2½ ft. wide, producing rich leadstuff, and opening profitable ground for stopes. The last 2 fms. driven in this end has been through a good lode of lead. The masons are building boiler flues, and engineers fixing machinery. All being well I hope to get the engine to work in about three weeks, say Saturday, July 16, and I hope to have the pleasure of seeing the directors down, and I am sure they will be satisfied that they have a great and valuable property.

EAST ROMAN GRAVELS.—A. Waters, June 23: There is no material change to notice here since last report. A full account in detail of the various points in the mine will be in your hands on the 27th inst., as requested. We have to-day sampled 40 tons of lead ore.

EAST WHEAL CREBOR.—G. Rowe, June 22: The south lode in the 70, west of engine-shaft, is without change in character since last reported, being about 18 in. wide, producing arsenical munda, with occasional stones of ore. The north lode in the 70, west of cross-cut, is improving in character, with arsenical munda and stones of good quality copper ore. The lode in the stope below the 60 is worth 8½ per fathom. We are exceedingly busy in preparing for our next sampling, which we calculate will be about 60 tons of copper ore.

EAST UNY.—H. Eddy, James K. Harvey, June 21: Since commencing operations here at Christmas last we have driven the mine from the 30 to the 82, which is the bottom level, and, although during a very severe winter we had a large quantity of water to deal with, we have put the mine, pitwork, machinery, &c., in a good state of repair, and are now in a position to develop the mine with energy. In the 90 and 55, east of shaft, we found a cross-cut driven south from Davis's lode 23 fms. After driving it about 8 fms. further we cut the copper lode—formerly worked on in the 40; this lode is 1½ ft. wide, producing stamping work for tin, and some good stones of tin, in addition to rich stones of copper ore. We have driven on it 2 fms. east and 7 fms. west, the lode in the western end looking exceptionally promising. We have also driven the cross-cut 8 fms. beyond this lode, and shall cut another lode in 15 fms. further driving. The 82 west was driven on Davis's lode 27 fms., from which point we took it up. On starting it contained a small leader of good copper ore, which has kept improving every fathom, and is now 1 ft. wide, consisting of good work. In addition to this, we cross-cut the lode, and found another rich leader of copper 1 ft. wide, and only 3 ft. from the first. North of this lode is all stamping work for tin, being altogether 12 ft. wide. From the appearance of the stuff when broken it is very evident that we are near the junction with the great flat tin lode. By sinking the engine-shaft 12 fms. deeper this important junction of Davis's lode and the great flat tin lode would be met with, and as similar junctions with the great flat tin lode in the rich tin mines to the west of us have never failed to prove highly productive, we have every reason to believe that equally successful results will be met with here.

GAWTON COPPER.—George Rowe, George Rowe, jun., June 18: The lode in the 117 east is 6 ft. wide, producing very strong arsenical munda, with good stones of ore. The lode in the stope in the back of the 117 is worth 10½ per fm. No. 2 stope in the back of the same level (117) is worth 12½ per fathom. The lode in the 105 east is improving; worth 10½ per fathom. The lode in the stope in the bottom of the 105, east of cross-cut, is worth 8½ per fathom. The lode in the 95 east is yielding very strong arsenical munda, with good stones of ore. The lode in the 72, east of cross-cut, is producing 6 tons of munda per fathom. All other points in operation are progressing so fast as the nature of the works will admit.

GLASGOW CARADON.—William Taylor, Wm. J. Taylor, June 21: The shaft-men have hardly finished their bargain taking out penthouse and fixing skip-rod from the 102 to the 114, but will do so in a few days. We shall then be in a position to open on the branch we cut in the bottom of the shaft which turned out some good ore. There is not much change in the ground in the 114 cross-cut, but little more water. We expect we are near a branch; we passed two or three in the 102 cross-cut before we reached the new south lode at that level. No change to notice in the 102 south; ground continues hard. East from the winze in the bottom of the 90 the lode is worth 6½ per fathom. The stope and pitches throughout the mine vary in value from 6½ to 10½ per fathom. The new boiler to the winch and crusher is fixed and will be ready in a few days. We shall then push the dressing for next sampling as fast as possible.

GLENROY.—R. Rowe, June 21: I have just come from underground. We are now forking the water under the 103, and by Friday shall be clear and the men at work in the bottom. We have been getting some good stuff for lead and blende from the roof of the 25, but to-day it is not looking so well. The lode, however, is very changeable, scarcely two days alike. This piece of ground is just immediately above where the lode was so productive at and below the 25.

GODDARD'S LEAD.—R. H. Vivian, June 23: During the past few days the men have been employed raising the water-course 2 ft.; this work is now complete, and the power of the wheel is greatly increased for pumping. Very little has been done to the stoping during the week in consequence of the men being employed as stated above; now the stoping will be continued and proving the lode eastward.

GOODEVERE.—R. Knott, June 22: I am pleased to say the lode in the shaft is improving as we continue to sink in the west end of shaft; it is fully 4 feet wide, producing rich work for tin, with every appearance of still further improvement. The ground in the deep adit cross-cut continues favourable, and good progress is being made. The surface work is progressing satisfactorily.

GORSIEDD AND MERLLYN.—W. Edwards, June 23: The 70 east level still keeps hard, but more lead is coming in the stoves; the vein looks more favourable than it has done for some time; the men have driven 1 yard 2 feet since last report. In the 70 west level the south driving at the top of the lode is looking more promising; lead keeps about the same as last reported. I have a very high opinion of this level, and expect it will turn out well this month. The lode is worth for lead 20 cwt. per fathom; 3½ yards have been driven during the fortnight. The 90 west level is progressing very satisfactorily; there is more shale coming between the beds, which are getting darker, and very much like those underneath the 50 level above; more lead, blende, and spar is coming in the vein, also small portions from the heading, which I like to see very much, as it always makes a vein stronger—the lode is worth 15 cwt. of lead per fm., and the men have driven 2 yards. —Tributors: Two men in No. 1 pit in roof of the 70 east level; the lode is worth 16 cwt. per fathom. Two men in No. 2 pit; worth 20 cwt. per fathom. Two men in No. 3 pit; worth 13 cwt. per fathom. There were 10 tons of lead weighed out to-day, realising 105½ lbs.

GREAT HOLWAY.—W. T. Harris, June 23: Roskell's Shaft: The 110 cross-cut south continues to make fair progress; branches of spar are more frequent, and an increase of water issues from the forebreast. I purpose starting on Monday to drive out east and west to meet the runs of ore gone down from the levels above, also in a short time to further extend this cross-cut, as the indications are strongly in favour of more valuable discoveries in this direction. In

the 80 west the character of the lode is much improved, and is producing fairly of blende, slightly impregnated with lead ore; water also issues freely from the end, which promises further improvement. —Drammock Shaft: The pitch in the bottom of the 40 east is producing 1½ ton of lead and 1½ ton of blende per fathom. The pitch at this level, on the north lode, is worth 2 tons of blende per fathom. The pitch in the back of the 50 is worth 12 cwt. of lead and 1 ton of blende per fathom, and very promising for improvement. —Office Shaft: The pitch in the bottom of the 60 west is worth 10 cwt. of lead and 1 ton of blende per fathom, and the pitch in the back 8 cwt. of lead and 1 ton of blende per fathom. —Level Engine: The lode in the 60 east is worth 1½ ton of lead and 1 ton of blende per fathom. The lode in the rise in the back of this level is producing 1½ ton of lead ore and 1 ton of blende per fathom, and evidently entering the great run of ore now being worked upon on No. 3 pitch, where the lode is worth 5 tons of lead per fathom. No. 1 pitch, in the back of this level, is producing 2½ tons of lead ore per fathom; ground becoming stronger in going west. No other change in the underground department. Surface work progressing with the usual regularity. Yesterday we sold 20 tons of lead ore, at 11½. 5s. per ton, and to-day sent out samples for the sale of 30 tons of blende on July 1, and again next week we shall sample another parcel of lead ore. Progress is now good on the dressing floors.

GREAT POLGOOTH UNITED.—Wm. Richards, June 22: We have opened on the back of south lode east of cross-course; the lode seems to maintain both its size and character, as was found west of this point. We shall do nothing further in this direction until in a position to commence the adit, so as to enable us to sink the lode to the bottom of the shaft. —Deep Adit Level, Old Mine Lode: We shall finish opening this level about the 1st of the week, which will enable us to push on with this level into the hill. —No. 1 Lode: The men are making good progress in clearing up and securing Wheeler's shaft on this lode; and the ground seems to be tolerably firm, requiring but little timber, we hope to reach the cross-cut adit on an early date. In the trial shaft, sinking on the course of the new lode north, and overlying the great elvan course, the lode is fully 5 ft. wide—a strong masterly lode of great promise, principally composed of gossan, peach, and spar, producing good stones of tin; this lode is embedded in a beautiful channel of virgin ground—in fact, the general character of this lode, in my opinion, is sufficient to warrant the most sanguine expectations. We are pushing on with clearing away ground for the engine-house, stamps, &c., as fast as possible, and the contractors have commenced hauling the machinery on the mine.

GREAT WEST CHIVERTON.—J. Curtis, June 22: We are making good progress in sinking the engine-shaft below the deep adit; lode 3 ft. wide, with spots of lead in it, and looking kindly for the depth.

GREAT WHEAL POLGOOTH.—John Rodda, June 23: We are making good progress with the lead, having opened it for nearly half a mile in length, and the level or tunnel to take the water from the level will be completed in about a fortnight's time. This will give us a fall of about 60 ft. of 200 cubic feet of water per minute. The value of this as motive power cannot be too highly estimated; it will not only be a saving in the cost of coals and grease, but also the labour cost of two engine-men at least. The engine-shaft, I find is clear about 10 fms below the adit. We have ordered pumps, &c., which we hope to have on, in mine in a week or so, when we shall begin to fix the pumping gear.

GREEN HURTH.—Wm. Vipond, June 17: In the end of the opening level south from Swan shaft we have no ore to value yet. The sole and roof of the sandage level north continues to yield about 5 tons of ore per fathom. The stope south from rise over the 30 is yielding 1½ ton of ore per fathom. Stope No. 1 over the 30, going to Vipond's sump, is yielding 1 ton of ore per fathom; this stope has got into a little poorer ground just at present. Stope No. 2 is yielding 2½ tons of ore per fathom. The stope in the sole of the 30 going north is yielding 4 tons of ore per fathom. The stope above the 30 going on to Robinson sump continues to yield 12 cwt. of ore per fathom. There is no change yet in the cross-cut south from adit level. Outside work is progressing satisfactorily.

GWYDYR AMALGAMATED.—John Roberts, W. Sandoe, June 22: Cleminina: The lode in the south end, in the 3, and without any change whatever since last week. At the shaft we have put in the new windrope to the pump, and have commenced sinking, and we expect to get lead, according to its dip on the north of the shaft, in about 4 or 5 fms. sinking. —Aberllyn: The sump at No. 2 is still in good blende, and No. 2 end also is now getting into good saving work for blende. We have had to do some slight repairs to the crusher, and also change the jigger of the stone-breaker, which caused a small hindrance in the dressing, but all is right again.

HINGSTON DOWN.—Thomas Richards, June 22: No. 1 lode in the deep adit level east of the south cross-cut contains capel, quartz, arsenical munda, &c., and occasional good stones of copper ore, and is in its general character altogether of a very promising nature. No. 2 lode in the deep adit level east of the south cross-cut continues without any material change. Very good progress is being made with fixing the pitwork, &c., and no time shall be lost in completing the same that the sinking of the engine-shaft may be resumed below the 12 with as little delay as possible.

KIRK MICHAEL.—R. Rowe, June 22: I find the shaft to-day is down 2 fms. below the 20 fm. level. On Friday last the lode widened, and improved for lead; and to-day we have come down on a flat floor of ground, and the lode is again improved. In the 20 south we are still in slide, and confused ground, through which the lode is making its way with a little lead but no value. In the 20, driving north, the lode is about 1 foot wide, and worth 15 cwt. of lead per fathom.

KIT HILL GREAT CONSOLS.—Isaac Richards, June 23: I advised you in last report that in prosecuting our explorations on the lode in the quarry going eastward we came upon some old men's workings. We have since made a further trial by sinking, and have gone down on the course of the north part of the lode some 5 ft., and I am pleased to inform you that it maintains its size, from 3 to 1 ft. wide, and its character is of the finest description, being composed of capel, quartz, gossan, peach, and spar, and some good stones of tin, and is, in fact, scarcely to be found. The rather stormy weather we have been getting during the past week has somewhat interfered with our surface operations, but on the whole we are getting on fairly well.

LADYWELL.—A. Waters, June 23: We have now driven the adit cross-cut east, and bored a deep hole beyond the end far enough to be satisfied that hitherto we have followed the main lode south of the cross-course. We intend, therefore, to reserve the main level southwards towards the shale forthwith.

LADY BERTHA UNITED.—Thomas Neill, June 21: Since my last report I have been engaged in the clearing of the mine, and have made considerable progress in the clearing of the new shaft and laying down the tramroads in the lower levels. The lode throughout the mine are looking exceedingly well, and yielding an abundant supply of arsenical munda and copper ore which is of a high percentage, having large quantities broken under ground, and a parcel of munda and copper dressed at surface ready for sampling. We have forked the water to the bottom of the mine, but the levels are choked with slime, &c., therefore we have not been able to report on the nature of the lodes. We shall commence immediately with the clearing of the same, and hope to be able to send a full report next week. The machinery is working well.

LEADER.—J. A. Ede, June 22: The ground in the forebreast is improving, but we have not approached the lode as yet. The ground upon the strike of the lode mentioned in my report of a fortnight back is daily improving. The heading is now dipping rapidly.

LLANDEGLA.—H. Hotchkiss, June 22: We are making fair progress in driving the cross-cut south from the bottom of new shaft, the ground being without material change to notice. The lode in the forebreast at the 35 yard level, west of winch shaft, is now over 3 ft. wide—a fine-looking lode, of a very promising character.

MELNIN.—John Gilbert, June 22: The ground in the 30 cross-cut, driving south of Gundry's shaft, is still very congenial for producing copper ore, cheap for driving, and will stand firm without timbering. The lode in the 60 driving west of shaft, on the main lode, is 2 ft. wide, composed of spar and blende, and some saving work for copper ore. The ground in the 70 cross-cut, driving north of the main lode, is of a mineralised character, and a little better for driving, but still too dry to be very near the lode. The lode in the 80, driving west of Gundry's shaft, on the main lode, is 3 ft. wide, yielding 1 ton of copper ore per fathom, and some saving work for tin ore. The lode in the 90, driving west of Gundry's shaft, on the south part of the lode, is 4 ft. wide, yielding 2 tons of copper ore per fathom, and some good stones of tin. The lode in the 90, driving west of shaft, on the north part of the lode, is 3 ft. wide, and yielding some good saving work for copper ore and blende. The lode in the 110, driving west of shaft, on the south part of the lode, is 4½ ft. wide, and will yield 3 tons of good ore per fathom, but the ground is very hard, wet and ugly, and spare for driving. The lode in the 110, driving east of shaft, on the main lode, is 4 ft. wide, and yielding good stones of copper ore. The lode in the 110, driving west from the old engine-shaft, is 3 ft. wide, yielding occasional stones of copper and tin ores, and setting out an increased quantity of water. The lode in the 110, driving east of the old engine-shaft, is 4 ft. wide, yielding stones of copper ore, and some saving work for tin. The lode in No. 1 winze, in the bottom of the 90, west of Gundry's shaft, is 4 ft. wide, and yielding 2 tons of ore per fm. The lode in No. 2 winze, in the bottom of the 90, west of Gundry's shaft, is 5 ft. wide, and yielding 4 tons of ore per fathom. Gundry's shaft is still in the elvan, and is down about 9½ fathoms below the 110, and at the present rate of sinking we shall complete this lift to the 120 in about two months' time. Our sampling yesterday was computed 624 tons of copper ore.

MOSTYN CONSOLS.—J. Woolcock, June 22: During the past month we have been engaged in a new bucket lift in engine-shaft which is now complete down to the engine level. Sweep-rod and bobs have also been fixed between shaft and engine, with all necessary connections, and had the water all out on Thursday last. I am pleased to inform you that all the machinery works well; we are now clearing up the bottom of the shaft as fast as possible preparatory to sinking the shaft to gain a deeper hold on the lode. We have commenced this week driving west on the course of the lode, which is producing good silver-lead ore, and from present indications the ore is stronger in the bottom of the level. I would now recommend you to drive a cross-cut north from engine-shaft at the 30, to reach the main lode, so that we may increase our returns very considerably. The pitwork and all requirements being ready, we can resume our work with less difficulty than heretofore, and I have strong confidence in satisfactory results which will be beneficial to all connected with the mine, and that at no very distant period.

MOUNT CARBIS.—George Johns, June 23: The engine-house is completed, and the engineers are busily employed in getting in the engine. The boiler makers are busy building the new boiler in the mine. In the shaft on the Great Flat lode we have been somewhat delayed by the water; this we have now tubbed out, and are sinking with good speed. As soon as we get this shaft through we shall proceed to open upon the lode at the deep adit level to ascertain some very rich stones of grey and yellow copper ore.

MYNYDD GORDDU.—Thomas Kemp, June 22: In the past week we have further cross-cut the lode in the 46 fm. level 15 ft., making the total distance through the north or main part of the lode 3 fms. 3 ft.; throughout this cross-cutting the lode is principally composed of killas and crystallised spar of a loose and friable nature. The men will for two or three days be employed in timbering same; when done they will commence driving west on the line of lode, and we have 5 fms. to drive before getting under the perpendicular of the run of ore going through the side of the level in the 34 above, and I owing to the dip of the ore being steep, it may make the distance some 3 or 4 fms. further before entering same. The part of the lode carried in sinking the winze in the bottom of the 34 (which is 20 fms. in advance of the 46) has since last report improved, now worth 13½ per fathom. The lode in the rise on counter lode, over the 34, is worth 10½ per fm. No. 1 stope over the back of the 34 on north part of the lode is now worth 12½ per fm. No. 2 stope on main part of lode is worth 12½ per fm. The arch of ground in the bottom of the 12, west of shaft, is worth 15½ per fm.

The north part of the lode opened on by the 12, west of shaft, I am sorry to say is for the present disordered by a cross-joint carrying flooken obliquely crossing the driving, but I trust that as the level extends away from the influence of the said cross-joint the lode will again assume a better appearance. Hauling and dressing going on with speed, and all work throughout the mine is being pushed with energy, and we shall have another 20 tons of silver-lead ore ready by the 5th prox.

NEW BRONFLOYD.—Thomas Kemp, June 22: No. 3 Shaft, North Lode: The stope over the 52, to the east of shaft, is worth for the width (21 ft.) 15 cwt. of lead ore per cubic fathom. The men in the pitch to the west of shaft, and over this same level, have finished hauling their stuff, and before we can take away any more ore from here the old stuff in the level over the 43 must be retimbered, and the workings under filled up with attle in order to take away this arch of ground. I estimate the cost in doing this work in timber and labour at 50½, and I also estimate the amount of ore in this arch to be over 100 tons. I should say it is desirable that we should proceed with this at once.—No. 2 Shaft, Middle Lode: The lode in the pitch over the 52, and to the west of shaft, is worth for the width (13 ft.) 15 cwt. of ore per cubic fathom; the lode here continues hard for breaking. The lode in the stope over the 52, to the west of Lloyd's cross-cut, is worth 25 cwt. of ore per fathom. The men in the pitch over the 40, and to the west of shaft, are getting on well in filling up the old workings with attle. I expect this work will be finished in about a week, when they will commence stoping on a good lode, and from all appearances they will soon have a good pile of orestuff for the crusher. Our crusher has been idle for the last two days undergoing repairs; however, I hope to have everything in order by Saturday, when crushing will be resumed. I hope to be in a position to sample 20 tons of silver-lead ore by the 5th prox.

NEW KITY.—W. Vivian, June 23: We are now clearing the engine-shaft below the 14. I hope to reach the bottom of the shaft in two or three weeks from this time.

NEW WEST CARADON.—N. Richards, June 22: The rise in the back of the 42 will yield 1½ ton of copper ore per fathom. The lode in the level, driving west of Hallett's cross-course, is much improved, and will now yield 2 tons of ore per fathom, and seeing that we have a run of 150 fms. west on this lode I think the probabilities are that we shall have a good mine on this lode alone. I may be noticed that this lode was never cut or even seen in this part of the ground until I intersected it by putting out a cross-cut.

NEW WEST GOGINAN.—A. Francis, June 22: We have completed the collaring up of Poulter's shaft to surface, put in ladder-rod, laid down tramway from shaft for removing the stuff, and have recommenced sinking again, and find some splendid lode stones daily. We are also continuing preparations for dispensing with hand labour in drawing water and stuff, and as soon as we strike solid rock shall attach winding and pumping gear to the large water-wheel. Our progress hitherto has been excellent. I have carefully dialled the workings of the mine, and have completed plan and section. I find the Crm Erln lode has been cut through in the branch workings, but nothing done on it; from appearances, I think the probabilities are that we shall have a good mine on this lode alone. I may be noticed that this lode was never cut or even seen in this part of the ground until I intersected it by putting out a cross-cut.

NORTH D'ERESBY.—R. H. Vivian, June 23: There is very little change in any of the bargains since last week. The shaft is evidently going down in a large lode, and more water coming out of the vein. There is very little waste in the stuff coming from the shaft; it is of a very kindly nature, mixed throughout with lead and blende. We shall soon reach the footwall part of the lode, which we have every reason to think we shall have a further improvement.

NORTH GREEN HURTH.—Wm. Vipond, June 17: There is no change of any importance in the level from Crook Burn. No indication yet how near or how far it may be to the first vein. It is now driven 19 fms. 3 ft. from entrance; driven this month 5 fms. 4 ft. In the upper level we have pat and clay at top, and a soft plate putting on the sole, which shows the level is under the scar limestone, which is on the quarry where the vein is seen, and where the samples of ore were got.

NORTH HERODSFOT.—T. Treleas, June 23: The sides of the 80 fm. level have been cleared and secured 15 fms. in the past week, and laid the tramroad in the same. At the point now reached the stulls are broken down and the level full of stuff. We continue to break good stones of lead ore from the bottom of the level as we go on. The stope in the back of this level will now yield 8 cwt. of lead ore per fathom. There is no change in the 50 end since our last report; the stope in the back continues to yield 5 cwt. of lead ore per fathom. We have now a good ventilation in this level. The masons are getting on with the crusher-house very fairly.

NORTH PENSTRUTHAL.—Stephen Davey, W. Polkinghouse, June 23: Highburrow Shaft: In the 120 cross-cut north we have the vein of the lode which is hard and letting out a quantity of water, which makes it slow of progress, but we hope to get into the lode and cut it through in the course of another week. The lode in the 108, driving east of shaft, is 2½ ft. wide, of a promising appearance. The lode in the 108, driving west of shaft, is 3 ft. wide, producing occasional stones of tin and a little copper. The lode in the 70, driving west of shaft, is 9 ft. wide, and worth for tin 6½ per fathom. In the 58, driving east of cross-course on the No. 2 lode, the lode is 2 ft. wide, still producing munda.—Ward's Lode: The lode in the winze sinking below the adit is 3 ft. wide, and worth for tin 5½ per fathom.

NORTHERN LEAD.—T. Tonkin, June 23: The ground is easier to work in the adit level stope, and the yield of ore (8 cwt. to the fathom) is maintained. There is a little ore in the drive forward into the coal sills. The ground is moderately easy in the 15 level tribute pitches, and the yield of ore 8 cwt. to the fathom. The flats are at present very changeable, and we are driving west from the stope ground, where it is likely to yield us better ore. The stope above the 42 west section have improved in appearance since my last report. The lode is now more settled, and a better yield of ore is the result in the western ground. The eastern parts of the stope are yielding 10 cwt. to the fathom. The ground is harder than usual. The stope, east section, are not changed in character or yield since my last. The rise west of Gin shaft in Quarry Hazel sill is in easy ground of a promising nature. We have had some showers this week, which has increased our water supply a little. All the machinery, however, we have still to drive by means of steam power.

OLD GUNNISLAKE.—W. Skewis, A. F. Saccombe, June 23: We are making good progress with driving the cross-cut north under the slide. In the beginning of the week we cut a stream of water, which is still flowing from the end. From this circumstance we think that we are getting near to a good lode. —H. Nottingham, June 23: North Lode: Engine-Shaft: At the end of the week we had to stop pumping whilst putting in some new rods and new angle-bob at the 13. We have this work done, the water out again, and sinking resumed to-day. I expect the lift of pumps I have bought for the 45 to be here in the course of a week or so.—The 45 Fm. Level: This level driving south is now entering the No. 1 run of ore ground gone down in the No. 33 south; the lode is widening, and has a very strong appearance, mixed throughout with large patches of lead and blende; worth 1 ton to a fathom—I may here remark that the shaftmen when not working in the shaft are stopping in back of the 45 level. The 45 stope, north of shaft, is worth 25 cwt. of lead and 1 ton of blende to a fathom.—The 33 Fm. Level: The winze sinking north of shaft is still in hard ground, and rather poor for lead; I am daily looking for an improvement here. No. 1 stope, north and south of No. 1 winze, is worth 1 ton of lead and same of blende to a fathom. Stope at No. 2 is worth 10 cwt. of lead and 15 tons of blende to a fathom. No. 3 stope south is worth 12 cwt. of lead and 1 ton of blende to a fathom.—Goddard's Lode: The 33 driving south is at times yielding nice lead, but is very changeable, and irregular in yield. Thus far this level has not opened out so well as expected; but there is lead going down under the 23 stope further south of us, which I hope will meet about driving this end. The tributaries working over the 23 are doing better this month, and have a chance of opening some fresh ore ground south of the old No. 2 stope.

—Surface: We are pushing on our new work as fast as possible, often keeping the hauls on overtime. We have now a good firm sweep-rod connecting the flat-rods to the wheel, and a new bob fixed down at the 13. We have also put new iron buckets into the rail-wheel of the crusher, and done a good deal of the other necessary repairs, and we have a good deal to do yet in putting new supports, &c., to our launders and tramways. The joiners have also the round bobbles in hand for dressing the accumulated slimes. We are getting on well with the walling of the embankments of our reservoirs, and the heaviest part of this work will be over in another week. Dressing is going on well. We are sending out samples to-day of 20 tons of lead and 35 tons of blende.

PENHALLE AND BARTON UNITED.—Jas. Evans, June 23: We have now completed the fixing of the balance-bob at Barton shaft, and have everything in readiness awaiting the arrival of the additional pumping-engine. The winch rounds also are finished, and the winches nearly ready for work. I reported last week that in opening up the east end of Barton adit we had discovered a promising lode, 3 to 4 ft. wide, and I am now glad to be able to say that it is looking better as we advance upon it, and that it is I consider fully worth 10½ per fathom.

PELYN WOOD.—June 23: We are progressing very satisfactorily with driving the adit level, which is about 33 fathoms deep, on the course of No. 1 counter lode, which is about 4 ft. wide, composed of gossan, friable quartz, prill, and occasional excellent specimens of native grey and ruby copper ore, a stone of the latter recently assayed produced 72 per cent. In extending on the course of this lode I look daily for an improvement, and on reaching that important point ahead of the present end, where it forms a junction with an east and west lode (one of the celebrated Fowey Consols lodes), I look for and fully expect a profitably productive lode. The other four lodes also visible in the costean pits, &c., present good gossan backs, and about 3 ft. wide. There are at least two very important junctions within the sett, which will doubtless, judging from the size and character of the lodes and their position when intersected, very considerably increase the value of the property. The wheel-pit and about 300 yards of least excavations are complete, and to any careful practical observer, the geological position being on the borders of the granite range, with five lodes of good size and character embedded in the same highly mineralised clay-slate formation as the Fowey Consols, and not losing sight of the important fact that ample water power is at hand for a thorough development of the property, they must conclude there is reasonable and good prospects of an early improvement and a prosperous future.

PEN-YR-ORSEDD.—G. Bellis, R. Prince, June 23: The ground in the 150 north cross-cut continues of a very promising character, there being an increase of spar, and also a little congenial clay in the joints. The intersection of the lode is only a matter of a few days work, and will certainly be accomplished before our next report, when encouraging news may be expected. The south cross-cut, though in a good local bearing stratum, is very difficult for drive, owing chiefly to the presence of chert in the limestone. The water, which has given us a good deal of trouble, is not now nearly so strong as it has been.

PHENIX UNITED.—John Truscott, June 23: Setting Report: Old Sump Shaft: The 130 to drive west by the side of the lode, by six men, at 7½ p.m. fm. 120 to drive west by six men, at 14 p.m. fm. 100 to drive west by six men, at 10 p.m

May 3: The new winze in bottom of the 15 shows about 2 ft. of milling ore, and the indications appear favourable.

FOREIGN MINES.

The following were omitted for want of space last week:—

COLORADO GOLD.—Dr. Atcherley, the assayer and superintendent of the mines, writes under date May 23: In the cross-cut at No. 2 shaft strings of quartz have been continually met with, all containing gold. The engine is being fixed, ready to work the stamps. Sawed timber is being put in position, and will shortly be at work. The breach in the Gintagonta tank has been repaired, so that we shall have an ample supply of water. We are all as well as possible in health. As soon as the rains commence I am going to plant gum and casahuate trees.

WYNAD PERSEVERANCE ESTATE AND GOLD MINING COMPANY.—Telegram from John Jeken Cooper, M.E., the company's managing engineer on the estate: "Shaft enlarged 8 ft. down, main tunnel commenced. Excavations for Cook's machine completed; Cook's machine arrived complete." It will be remembered that the eastern part of Perseverance Estate is closely contiguous to the Alpha property.

PITANGUI GOLD.—Cable message from the agents of the company in Rio de Janeiro, dated June 8, advise the amount of produce obtained for the month of May as being 1750 oits. of gold. The value of this produce would amount, at 8s. 6d. per oita, to 7437. 15s. sterling.

COLORADO UNITED.—Advices dated 24th May: The silver ore shaft is down 70 ft. below the 11th level, and the 12th levels are about to be started. The 11th drift is connected to Taylor's winze. The No. 2 stopes in 10th level is turning out the same as heretofore. The mill has been running steadily.

LAST CHANCE CONSOLIDATED.—June 17: The following telegram from their agent has been received: "We have during last week run 26 ft. in tunnel No. 1, vein matter, with stringer of good ore running through it. We have run 13 ft. in tunnel No. 2, vein matter, mixed with low grade ore."

EBERHARDT.—F. Drake: Progress report for week ending May 21, 1881: West Drift: Run to May 14, 174 ft.; run for week ending May 21, 30 ft.; total distance run to May 21, 204 ft.; for month of May, 83 ft. No change. Everything running well as usual.

RICHMOND CONSOLIDATED.—R. Rickard, May 25: I beg to hand to you the report of the different operations for the past week: The south drift, from Lizotte tunnel, has been extended 12 ft.; the ground is somewhat harder, but still very favourable. The 300 north has been advanced 11 ft. in hard limestone. The 400 north, from No. 11 chamber, has been extended 12 ft. without any change. The 600 north, from No. 14 chute, has been drifted 8 ft. in the same character of ground. The 600 east, on shale contact, has been extended 22 ft. without any change. The winze sinking below the 700 north cross-cut is now down a total depth of 41 ft.; the bottom is not looking so well as it was, the ore being only a few inches wide. Good progress is being made in the sinking of the main shaft. On Saturday all ore breaking was suspended. The furnaces will close down on Monday next, and no more ore will be broken until the furnaces resume operations, which will be about the beginning of July.

RUBY AND DUNDERBERG.—Report on the mines for the week ending May 22: Dunderberg: The 700 ft. level has been advanced 17 ft. during the week, total 417 ft. from the shaft. The face of this drift is in much softer ground now, and I expect to make better progress until the winze is reached. There is about 80 ft. more to be run to make the connection. The No. 2 winze has been sunk 13 ft. during the week, total 142 ft. below the 600 ft. level. The No. 1 ore body continues 1 to 2 ft. wide, of good quality. The No. 5 ore body at the south winze between the 500 and 600 ft. looks well, and is producing the greater portion of the ore being shipped. The 600 has been advanced 11 ft. past the south winze. I expect to cut the No. 5 ore body in this drift shortly, as it is pitching down in this direction. The No. 8 ore body does not look quite so well, but is still producing some good ore. There is a slight improvement in No. 4; the ore is somewhat larger and in softer ground, which is a favourable indication. The 300 ft. west cross-cut has been advanced 5 ft. during the week; total 522 ft. from the north drift from the old incline. Have shipped 170 tons of ore from Dunderberg this week, and have 46 men and 8 tributaries at work.—Bullwhacker: The ore in rise above the 325 ft. level continues about 3 ft. wide and of good quality. The south-east cross-cut has been advanced 10 ft. during the week, and ore encountered 23 ft. below the rise. The rise has been run 15 ft. north and 6 ft. south on a vein about 4 ft. wide, containing low grade ore and iron, with occasional bunches of several tons good ore. This part of the mine looks very promising at present. Have shipped 14 tons of ore, and have 10 men at work.

—Copy of telegram received from Eureka to-day, June 14: The week's run from the furnace was \$13,500, from 212 tons of ore, producing 36 tons of bullion. The shipments of the week were 255 tons.

PIERREFITTE.—June 11: In No. 3 level we have commenced cross-cutting north to ascertain if any portion of the lode is near the level. In No. 2 level the portion of lode being carried with the end yields 2 tons of lead ore and 4 tons of blende per fathom. No. 2 stopes below No. 1 level, 8 tons of lead ore and 4 tons of blende per fathom; 89 tons of ores have been sent down over the cable during the past week, and about the same quantity broken from the stopes, &c. We have had very heavy rains during the past week, which has kept nearly all surface operations in abeyance.

CHONTALES.—William White, May 5: Estrella Mine: In my last report it would appear that we should have made greater progress in driving during the past month, but, unfortunately, after a stratum of hard greenstone came in from the north, and the south side being previously hard, the lode became squeezed and unproductive by coming in contact with this hard layer. We had to use dynamite, and have driven 8 varas, but the ground is again getting easier, and the men more accustomed to the work, so that by next month I hope to give a more encouraging report.—Consuelo Mine: Here during the past month we have got through the run in the deep adit (referred to in last report), have cleared and repaired 23 fms., and are now in 44 fms. from the mouth of the level. The ground so far is easy for progress, and backs dry; but there is water in the bottom, which deepens towards the end, so that now we have to carry in the back to fill the bottom above the water. I hope to have this level sent right, and to report progress by next month in extending into new ground. We have had no quartz from the last month's drivings to supply the stamps. Consequently there has been nothing doing in that department, saving the carrying out of all possible repairs for the future. Total costs for April is \$137, in which there is charged for freights from port for timber, and for Messrs. Hatch and Brown's account \$137; but these items will soon be greatly reduced.

POTOSI.—Extract from mine captain's letter, dated May 6: Main shaft: This is being sunk 4 ft.; the lode is 3 ft. wide, but the quartz obtained therefrom is rather poor—I think the lode will increase again in size as we go a little deeper. A few droppers have made their appearance in the heavy wall, which is a good indication. The winze west of this shaft, sinking below the bottom of the No. 6 level, is being sunk 6 ft.; the lode is 3 ft. wide, the quartz about the same nature as in the main shaft. The stopes west of shaft at the No. 5 level produce a large amount of quartz, but not rich in gold. The lode in this stopes is declining in size, but no doubt will improve in value; the lode is 6 ft. wide.—No. 1 shaft: This shaft is being sunk 6 ft.; the lode is 4 ft. wide, and produces good milling rock—we are preparing to fix a small lift in this shaft, which will be attached to the main engine. The drift driving east of No. 1 shaft at the No. 6 level has been driven 10 ft.; the lode is completely cut out by a cross-head, which has passed from north to south at this level, but we hope to gain the lode again in driving a few feet further. You will see by my former reports that this cross-head or slide has followed us down a little west of the air shaft for some distance, but is now dipping west faster than in the levels above; we have 40 ft. further to drive this drift to communicate with the air shaft—this being done a constant supply of quartz can be got both for the No. 1 and air shafts haulage.—Air shaft: Little has been done in this shaft since the break down of the vertical engine, on account of not being able to haul away the quartz at this point. We shall push on the drift at the No. 6, in order to make the communication as soon as possible with No. 1 shaft. Peru: Atwood's shaft is now sunk 59 ft. from surface; the lode in this shaft is 3 ft. wide, and of a very promising character. No doubt but what the company has a splendid property here. Some very fine stones of quartz are being met with in sinking. The shaft east of Atwood's shaft is being sunk 60 ft. from surface; the lode in this shaft is 18 in. wide, and seems to be more settled. A good horse whim or hoisting machine should be fixed to command both shafts. Hoisting with tackle out of such large shafts is a good deal behind the age.

HOOVER HILL GOLD.—Extracts of letters from resident and mining engineer, letter dated May 25, received June 7: Engine: The engine foundation has been completed on Monday, and the mechanics are now busy laying the plate bed down. The engine will have a remarkable well-built foundation. Masons are now walling up for boiler foundation. The ore bins are going up rapidly; most likely the main framework will be got through before the end of this week. Nearly all the machinery has been carried out except the stone-breaker, and that will be taken in hand next week. It is a very heavy casting, more so than any we make in England, and will test our light bridges on the road severely.—Mine: Both drifts in Gallimore continue to be driven in the same quality of ore without any apparent change in the nature of the stone. I have decided as soon as the repairing is completed in Provost, which will take until the end of the week, to continue sinking in, and reach thereby the zone below Briol's workings; this will be a matter of 20 to 30 feet. Yesterday we broke into the hard quartzite dyke in Briol's open-cast drift; this is the first point we have ascertained. Now Gallimore and Provost stand 50 feet further back, or more, and how far its thickness is beyond these pits we shall only find out by exploring, but should the dyke not extend beyond these points its breadth would, I believe, be considerable, and if we can satisfy the directors that the entire mass, or a fair portion of it, is auriferous to the degree required for successful manipulation; and, so far, we have every reason to be satisfied—then we may rest perfectly satisfied with what the future will bring us. Breaking into this dyke I had the pestle and mortar going all day, and if I cannot report the quality as rich, I can honestly say it pans fair, and will make good stamp work; but it is too early to speak of the quality. In another place I am opening up a ledge at surface that pans remarkably well. All this goes to accumulate good stamping ore. We have many such places where ledges drop up to surface containing good ore. Our great point is, however, to run through the entire mass, with the tunnel at a reasonable depth from surface.—Surface: I let a contract to some local dam builders to build our dam, finding their lumber for grouting, sills, ties, and floodgates, in all complete for the sum of \$700. I have had the contract open for some time back; could not get men to take it at my figure (\$500), and, not to delay the work longer, gave them their price. The Wharrie river runs low at present, and these men, to take advantage, are hard at it with 40 to 50 men, and that in from early sunrise to late at night, with this force, a fortnight longer will see it finished; this week will complete the water courses. The tramroad is being brought down with the balance of surface men. In all, I can report with pleasure that everything is progressing very satisfactorily. I shall have my portable assay furnace up this week, when I will set about assaying the mineral from all quarters on the property.

Letter dated June 1, received June 14: I have been assaying in the last two days ore broken from the present workings and from surface in many places. The lowest assay was \$18 per ton from surface ore, up to \$155 taken from the present end in Gallimore; it will, indeed, be an extraordinary thing if we obtain good results in panning and assaying and not in the mill; but I feel satisfied that we shall have good results.—Mill: We continue to make fair progress. The engine foundation has taken longer than I expected, but the work is very solid—a solid cement body. We have come to that stage where a week's work gives little show. The entire height of the ore bins and stone-breaker floor was completed this week. The boiler foundation is being built.—Mine: There continues hard in the tunnel. Now that the board has given permission to put in boring-machine I shall lose no time in getting it ordered and brought to the mine. The quartzite dyke intercepted at Briol's open-cast at starting, but now under cover, is changing into more white quartz, and pans fair. About 20 ft.

ahead we shall strike that portion of the dyke which holds on so well in Gallimore and Provost. Gallimore drifts, both ways, continue to turn out the same mass of ore as reported from time to time in the past. Contractors have many hands working on the dams on Wharrie river, and if no rain comes for the next week or ten days it will be completed. The tramway is progressing well. I have received tram rails, so that the road can be completed at once.

CANADIAN COPPER.—Francis Bennetts, June 3: At Bolton Mine and the Acton Mine there is no change of importance since my last report.—St. Francis Mine: The men have struck a cavity (vugh) in the winze sinking in the bottom of the adit, east of main shaft, but have not ascertained its dimensions nor size or quality of the ores surrounding it. Cavities are one of the characteristics of this vein, and the richest and largest deposits of ores have been found in their vicinity.—Hartford Mine: There is a good vein of 6 ft. wide in the 55, east of No. 7 shaft. The 40 and the 50, east of No. 7 shaft, also show a good vein of ore of from 3 to 5 ft. wide. And in a rise above the back of the 10, at No. 7 shaft, there is a vein of good ore of from 5 to 6 ft. wide. At No. 1 shaft the winze is completed, and I trust to commence hauling out the water in a few days, as there is comparatively little water to haul out before we can break ores. I expect to have some of these ores in the present month's returns.

FLAVILLA.—R. Gundry, May 25: Since my letter to you of the 9th inst. we have drilled about 13 ft., and taken out about 1½ ton of ore in the Brook's drift. During some portion of that distance the ore body has been very small, but it looks a little better now. In No. 1 rise we have drifted about 10 ft. without any favourable change. We are sorting and mixing the ore preparatory to sacking and shipping it. I think we have from 15 to 18 tons of ore, which ought to be worth at least \$80 per ton.

CAPE COPPER.—Capt. Henwood and Lanksbury, April 30: OOKIE: The 92 ft. cross-cut south-east of No. 36 winze is now worth 4 tons of copper ore per fathom. The ground in the 92, north-east of No. 36 winze, has since our last report produced some stones of copper ore, and the present forecast still looks very kindly. The stopes at this depth continues to maintain its value of 9 tons of copper ore per fathom. No. 41 winze sinking below the 80 has declined a little in value; present bottom worth 3 tons of copper ore per fathom. The ground in the 80, south-east of new shaft, is looking more promising, and at present produces a little copper ore, but not sufficient to value. The 80, east of No. 25 winze, is still unproductive; the ground is composed principally of quartz. The 68, south-east of No. 31 winze, yields about 1 ton of copper ore per fathom. The 58, north-west of No. 40 winze, is worth 4 tons of copper ore per fathom. The 58, east of No. 40 winze, has not undergone any change to notice; the ground is spotted with copper ore, but not in paying quantities. The stopes throughout the mine are looking well.

SPECTACLE.—Capt. Henwood and Lanksbury, April 30: The sinking of the incline below the 64 proceeds satisfactorily; the ground still shows spots of copper ore. The winze sinking below the 64 has not met with anything of value since the last report. The ground in the intermediate level in the bottom of 53 yields a little copper ore, but not sufficient to value. The stopes, one in the 64, and one in the bottom of the 53, continue to yield about 3½ tons of copper ore per fathom.

TRIAL MINES.—Capt. Henwood and Lanksbury, April 30: The ground in the 12, east of Trial shaft, is still hard and sparry for driving.—Springbokfontein: The shaft has now obtained a depth sufficient for a 25, and we shall start to drive as soon as skip-road has been fixed. Near the bottom of shaft a patch of decomposed schist was met with, containing some very rich stones of purple copper ore.—Trial east of Springbok: The costeaning pit is being carried on, but nothing of value has yet been seen.

Returns: For April, Ookie, 1200 tons of 29 per cent.; Spectacle, 144 tons of 35 per cent.; Nababep, 23 tons of 21 per cent.—Bills of lading received: 590 tons of ore per Tarna, and 430 tons per L'Esperance.—Arrival at Port Nolloth: The Glamraon.—Sales of ore: 700 tons at 11s. 7½d. per unit, 800 tons at 11s. 9d. per unit, and 400 tons at 12s. per unit.

WYNAD.—Mr. J. J. Stamps writes: "I am stopping all outside work, getting the timber which have been cut out on different parts of the property, carried down to where the stamps is to be erected, and hope soon to be able to report having commenced the actual erection of the stamps. I will hurry the work on.—Drifts and Shafts: Our No. 1 drift is now 158 ft.; No. 2, 157 ft.; No. 3, 69 ft. Incline in shaft, 10 ft.; Quartz Creek driven on lode 11 ft. 3 in. Gallery in No. 2 drift, 4 ft. 9 in., and another gallery commenced on the lode. When I have driven a little further in No. 1 drift I shall commence galleries on each side of the lode there. The samples of No. 1 drift, which I have washed during the past week, have shown 31. 5s., 61. 10s., 61., and 52. 11s. 6d. of gold per ton of ore. Samples in No. 2, respectively 37. 8s. 4d. and 72. A sample from lode in Quartz Creek showed 1. 5s. of gold per ton.—Rich Bed: I have now the pleasure to report having struck in the shaft the top of a very auriferous lode, the first sample of which showed 41. 10s. of gold per ton. It is not the same class of ore we have in the drifts; it is more a red sandstone, with a quantity of boulders in it. I fully believe from this that we shall strike another lode in the drifts. By next week we shall have sunk several feet into this bed.—Ore extracted: I am now extracting from 1 and 2 drifts 15 tons of actual ore per day. As soon as we are able to open on the beds in Nos. 1 and 3 we shall get 50 tons daily. We shall have above 2000 tons ready for stamping when the stamps is ready, which will, I believe, be early in August."

SEVENTEEN.—Returns for month of May: Crude ore raised from the mine, 1225 tons of 1000 kilos.; crude ore sent from the mine to the dressing floors, 1227 tons of 1000 kilos. Crude ore dressed, 1042 tons; ragging dressed, 70 tons; tailings dressed, 100 tons; equal to 1212 tons of 1000 kilos. Market lead ore produced—88 tons first class, and 20 tons second class. Blende ore produced—450 tons first class, and 80 tons second class.

ALAMILLOS.—June 8: In the 130, driving east of Taylor's engine-shaft, there is a large, strong, and very promising lode, producing 2 tons of ore per fathom. The shaft has now obtained a depth sufficient for a 25, and we shall start to drive as soon as skip-road has been fixed. Near the bottom of shaft a patch of decomposed schist was met with, containing some very rich stones of purple copper ore.—Trial east of Springbok: The costeaning pit is being carried on, but nothing of value has yet been seen.

FORTUNA.—June 8: Canada Inocosa: In the 120, driving west of O'Shea's engine-shaft, the lode being divided into small branches is worth about ½ ton per fathom. In the 70, driving west of San Pedro's shaft, there is a strong and well-defined lode, producing ½ ton per fathom. In the 80, driving in the same direction, a length of paying lode was opened up in the past month, valued at ½ ton per fathom. The 90, driving west of San Pedro's shaft, is laying open profitable ore ground at 1 ton per fathom. In the same level driving east of San Pedro's shaft the lode is very regular, but not of any value at present. There is no improvement in the 80, driving east of San Pedro's shaft. The 120, driving east of O'Shea's engine-shaft, and producing ½ ton per fathom, has changed unfavourably during the past few days. The 100, driving east of Lowndes's shaft, has also fallen off very much in the past fortnight. In the 90, driving east of Santo Toma's shaft, a promising and productive lode worth 1 ton per fathom has been laid open at a very cheap rate. The lode in Navarro's winze sinking below the 110 has somewhat improved in the past few days, and now produces ½ ton per fathom.—Los Salidos: In the 175, driving west of Taylor's engine-shaft, the lode is a little more open than it was. There is no improvement in the 160 driving in the same direction. In the 175, driving east of Taylor's engine-shaft, a good length of profitable ore ground is being laid open, worth 1½ ton per fathom. The 160, driving east of Taylor's engine-shaft, consists of a strong, regular, and well-defined lode, producing 1½ ton per fathom. The driving of the 145, east of Taylor's engine-shaft, has been resumed; lode disarranged and unproductive. In the 130, driving east of Taylor's engine-shaft, the lode (worth 2½ tons per fathom) has fallen off a little in value in the past fortnight. The lode in the 120, driving east of San Pablo's shaft, is small, producing 1 ton of ore per fathom. Granite close and hard. In the 80, driving west of Palgrave's shaft, the lode is split into branches, and of no value. Arrogio's winze sinking below the 110 is going down in a strong and productive lode worth 2 tons per fathom. In Pepe's winze sinking below the 65 the lode has declined both in size and value. The usual returns of ore were kept up regularly during the past month, and the stopes in that time have not undergone any change of importance. The ordinary surface works are going on with perfect regularity, and the machinery throughout the mine is in good condition. We estimate the raising for June at 300 tons.—San Anton: The 45, driving east of Henty's engine-shaft, has again improved to 2 tons per fathom, and is being

opened up at a cheap rate. In the 55, driving in the same direction, good ore ground is being driven through, worth 1 ton per fathom. The 55, driving west of Henty's engine-shaft, has improved in the past few days, being now valued at 1 ton per fathom. The 45, driving west of Henty's engine-shaft, is still in contact with the same cross-course and elvan met with in the 30. In the 30, driving west of Henty's engine-shaft, the lode (worth ½ ton per fathom) is large, open, and inexpensively wrought. Plata's winze sinking below the 30 is going down in a very fine shoot of ore valued at 3 tons per fathom.—San Francisco: In the 25, driving east of San Francisco engine-shaft, the lode is very open, and yields occasional stones of ore. The lode in the same level driving west of San Francisco engine-shaft continues unproductive.—San Francisco Engine-Shaft: The masons are well on with the securing of it, and will soon leave the way clear for driving the bottom level, when great progress will be made, the lode being very soft. We have completed the walling of a winze-shaft on the north lode, on which several men will be set to work at once, and we expect to break ore in paying quantities from it. We estimate the raisings from San Anton at 40 tons per fathom.

BUENA VENTURA.—June 8: In the 40, driving east of Cox's engine-shaft, the lode is soft and easy for opening up, but does not contain any ore. The lode in the 50, driving west of Cox's engine-shaft, is very wide and of a promising appearance, containing good stones of ore. In the 40, driving in the same direction, a valuable piece of stopping ground has been opened up, but the end is poor at present. In the 20, driving east of Taylor's engine-shaft, a good length has been opened up in the past month, the lode containing carbonate of lead. The 30, driving east of Taylor's engine-shaft, has very much improved in the past fortnight, and now produces ½ ton per fathom. The lode in the 30, driving west of Taylor's engine-shaft, is small and unproductive. The ordinary surface work is going on very steadily, but owing to the engineers being much occupied at the other mines the erection of the engine has not progressed much in the past month. We shall now, however, get on much faster with this important work. The tributaries continue to get on fairly well. We are returning from all sources, and have been for a long time past 50 tons per month.

LINARES.—June 8: In the 15, driving east of Warner's engine-shaft, a good length of rich lode is being laid open, valued at 3 tons per fathom. The lode in the 130, driving east of Warner's engine-shaft, is small and disarranged, and the granite very hard. The 130, driving west of Warner's engine-shaft, is letting out a very large quantity of water. In the 115, driving in the same direction, the lode (worth ½ ton per fathom) is sufficiently large, but not so productive as it was. The lode in the 135, driving west of Pell's engine-shaft, is more open than it was, but does not contain ore enough to value. The 120, driving west of Pell's engine-shaft, has improved a little in the past fortnight, its present value being ½ ton per fathom. There is no improvement in the 135 east of Pell's engine-shaft. The lode in the 120, driving east of Pell's engine-shaft, is small, worth ½ ton of ore per fathom; ground expensive for working. The 105, driving east of San Francisco shaft, has changed unfavourably. No. 240, a new winze sinking below the 100, is situated east of Warner's engine-shaft, and in advance of the 115; the lode is worth 1 ton per fathom. The usual rate of returns was kept up throughout the past month, and the stopes are yielding fairly well at present. The ordinary surface works are going on very steadily, and the machinery is in good working order, notwithstanding a great influx of water at Warner's mine, which fortunately is again subsiding. We estimate the raisings for June at 250 tons.—Quintitos Mine: The lode in the 100, driving east of Taylor's engine-shaft, looks promising, and yields good stones of ore. In the 90, driving in the same direction, there is a strong and regular lode worth ½ ton per fathom, although it is much reduced in value. The lode in the 65, driving west of Cox's cross-cut, has improved, and is now opening up paying ground at 1 ton per fathom. In the 55, driving west of Cox's cross-cut, the men are put to cut into the north side to prove if there be any more lode there. Guillermo's winze, sinking below the 90, and worth 3 tons per fathom, has been temporarily suspended owing to an increase of water. We estimate the raisings for June at 75 tons.

YORK PENINSULA.—The directors have advised from the committee of inspection at Adelaide, with reports from the Kurulla Mine to May 10. The following are extracts from Thomas and John Anthony's report.—Kurulla: In the 67 east of Hall's shaft the yield of ore is 2½ tons of 16 per cent. The lode in the winze below the 55 east of Hall's shaft is worth 3 tons of 16 per cent. per fathom. At this 55 east, about 85 fms. from shaft, a cross-cut is being driven to cut the south branch of the lode. A winze is being sunk below the 45, nearly in a line with the last mentioned on the south branch, also a winze below the 45 on the main lode. This winze is at the extreme east end of the main run of ore, west of which a fair stopes will be opened on the holling of the winze to the 55. The 15 is driven east several fathoms into the section 398. At a point about 6 fms. east of the sectional boundary line a short cross-cut is driven, disclosing the south wall of the lode on which we are driving back west, the lode making tribute ground. At a point 10 fms. from the surface, in a trial shaft in section 398, we are driving south. We have set a tribute pitch in the back of the 15 (in section 398) at 7s. 10d. in the 17, and one in the same level further west, and in Kurulla (section 411), at 10s. At the 67 the tunnel is driven north of Hall's shaft about 2 fms., making room for the boring machinery. The main line of air-pipes is put into the shaft, and is now being carried from the shaft to where the air-compressor will be fixed; 44 men are employed on network and tribute on this lode. We may say here that while another stopes stands whole above the 55 the 67 remains untouched, making a reserve of ore of about 500 fms. of lode, or, say roughly, 1700 tons of 16 per cent. ore.

Morphe's Lode: The 55 is driving east, the yield of ore being 4 tons of 16 per cent., and in the same level west, the yield is 2 tons of 18 per cent. The 43 is driving east; the lode is poor, but a good south wall is being followed, and the chances of improvement are very fair. We are driving north at the 55, on the cross-course, to cut the north branch of the lode; 31 men are engaged stopping on this lode. Dressing Machinery: The crusher is at work, and doing fairly well. We shall get a large quantity of ore out of the several thousands of tons of stuff laid by, and which, it gives us pleasure to say, is richer than our ordinary stuff from time to time would indicate. For the present we use general terms, but by the end of the present month we hope to be in a position to state more definitely the actual yield of these low-class ores.—Ore Returns: 112 tons of ore had been sold in the colony, and there remained on hand at the mine 1541 tons of about 15 per cent., and 4450 tons of low-class ore of about 5 per cent. The change in the system of dressing from hand to machine work had necessitated some delay in sampling; but the mine superintendents reported that in the week following the date of their report they expected to sample 200 tons of ore, and that they hoped with the aid of the machinery thereafter to make regular returns of about 300 tons of 18 per cent. ore per month.

GREAT WHEEL CARADON.—A large lode has been discovered at a considerable distance to the east of the old workings, in new ground entirely. The lode, as far as seen, is fully 4 ft. wide, showing a splendid gossan back, with rich stones of carbonate and blue lead, at a depth of only about 2 ft. from surface, of a strong masterly character. This augurs well for the new company on its first commencement.

WEST KITTY.—A circular has been forwarded to the shareholders stating that the revocation question alluded to by the Chairman at the last meeting, together with a very important addition to the property, has been finally arranged in favour of the company, subject to acceptance at the next shareholders' meeting. In the meantime the committee act on their individual responsibility. It is added that the advantage to the company can scarcely be over estimated. This is the third and most important addition of ground the company has acquired since commencement of business. From driving and rising alone (for no stopping has been done) there will next week be a sale of over 20 tons of black tin since last meeting. It has been impossible to stamp more with present appliances, but additional stamping power is being provided with all dispatch.

HOLLOWAY'S PILLS.—ALL OUR FACULTIES.—Almost all disorders of the human body are distinctly traced to impure blood. The purification of that fluid is the first step towards health. Holloway's Pills recommend themselves to the attention of all sufferers; no injurious consequences can result from their use, no mistake can be made in their administration. In indigestion, confirmed dyspepsia, and chronic constipation the most beneficial effects have been, and always must be, obtained from the wholesome power exerted by these purifying Pills over the digestion. Persons whose lives have been restored to ease, strength, and perfect health by Holloway's Pills, after fruitless trial of the whole pharmacopoeia of Physic, attest this fact.

CHAPLINS' PATENT STEAM ENGINES AND BOILERS.

PRIZE MEDAL, INTERNATIONAL EXHIBITION

STEAM CRANES,

Portable or Fixed, for Railways, Wharves, &c., for unloading COAL BALLAST, &c., from 10 cwt. to 30 tons.

LOCOMOTIVES,

6 to 27-horse power. For Steep Inclines and Sharp Curves. Gauge from 2 feet upwards.

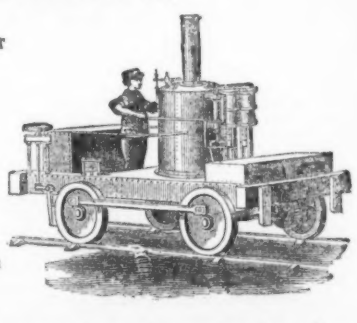
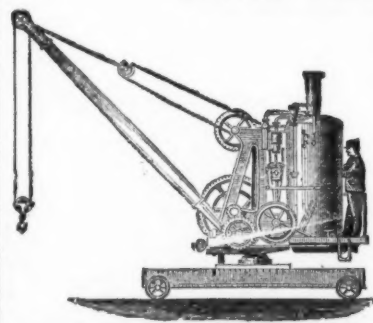
Geared to draw very heavy weights in proportion to their power, and SPECIALLY SUITABLE FOR

Contractors' Work, Railway Sidings, Coal Mines, Quarries, Gasworks, &c.

These Cranes were selected by H.M. Commissioners to receive and send away the Heavy Machinery in the International Exhibitions 1862, 1871, and 1872.

WIMSHURST, HOLLICK, & CO., ENGINEERS.

Works: REGENT'S CANAL DOCK, 602, COMMERCIAL ROAD EAST, LONDON, E. (near Stepney Station)



TWO GOLD MEDALS.

FOX'S PATENT

PARIS, 1878

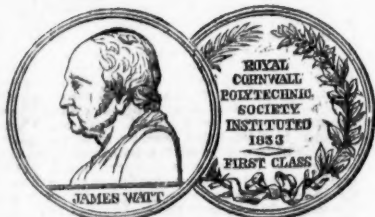
CORRUGATED FURNACE FLUES,

NOW APPLIED TO OVER

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IND. H.P.PRICE LISTS AND
PARTICULARS
ON APPLICATION.SOLE MAKERS—
The LEEDS FORGE CO., Ltd.
Leeds. Yorkshire.**AIR COMPRESSORS,** Prices from £48. Silent, Valveless, Simple, and Efficient.**ROCK DRILLS,** Valveless, Simple, and Efficient; will Bore Holes in Hard Rocks 3 feet deep in eight minutes. Prices from £30.**FRESH WATER MACHINERY,** Guaranteed to produce from Sea Water, with a Consumption of only 1 Ton of Coal, 4400 Gallons, or 20 Tons of Best Quality Drinking Water, Clear, Cold, Bright-looking, and Agreeable, and equal in Taste and Appearance to the Best River or Spring Water. Over 900 supplied.**A. NORMANDY, STILWELL, AND CO.,** Phillips Street, opposite Custom House Station, Victoria Docks, London, E., where above may be seen in Operation.Prize Medal Mining Institute
of Cornwall.
Highest Prize International
Exhibition, 1880-81,
Melbourne.**SANDYCROFT FOUNDRY AND ENGINE-WORKS CO. (LIMITED), CHESTER.**

SPECIALITY MINING MACHINERY.

ESTABLISHED 1838.



PUMPING & WINDING ENGINES.

AIR COMPRESSORS AND ROCK DRILLS.

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Crushing Mills & Stone Breakers.

DRESSING MACHINERY.

BOILERS.

WATER-WHEELS.

FORGINGS.

MINING TOOLS.

AND STORES OF ALL KINDS.

**GOLD & SILVER**CRUSHING AND AMALGAMATING
MACHINERY.Californian or Gravitation
STAMPS

OF ANY SIZE OR PATTERN

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Concentrators & Separators.

BUDDLES.**RETORTS.****SIEVING & BLANKETS.**

Amalgamated Copper Plates.

PATTERSON'S PATENT ELEPHANT ORE STAMPS.

IN USE IN CORNWALL, CALIFORNIA, BRAZIL, AUSTRALIA, AFRICA, AND INDIA. THE BEST MACHINE FOR PULVERISING

GOLD QUARTZ,

And other hard and refractory Materials. Particularly designed and adapted for transmission Abroad, and for Countries where Transport is a difficulty. Quickly and economically erected. Can be seen stamping Quartz near London.

LONDON OFFICE: 6, QUEEN STREET PLACE, E.C.**INCREASED VALUE OF WATER-POWER.****MacADAM'S VARIABLE TURBINE.**

This Wheel (which is now largely in use in England, Scotland, and Ireland) is the only one yet invented which gives proportionate power from both large and small quantities of water. It can be made for using a large winter supply, and yet work with equal efficiency through all variations of quantity down to a fifth, or even less if required. It is easily coupled to a steam-engine, and in this way always assists it by whatever amount of power the water is capable of giving, and therefore saves so much fuel.

This Turbine is applicable to all heights of fall. It works immersed in the tail-water, so that no part of the fall is lost, and the motion of the Wheel is not affected by floods or back-water.

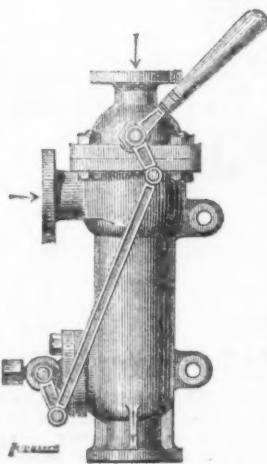
References to places where it is at work will be given on application to—

**MacADAM BROTHERS AND CO.,
BELFAST.**

WHAT IS YOUR DISEASE—WHAT IS YOUR REMEDY?
GRATIS, free by post on receipt of Two Stamps to pay Postage.

THE BOOK OF POSITIVE REMEDIES.—
It is the Book of Positive Medicine for the Cure of certain forms of Debility and Nervousness, viz.—Mental and Physical Depression, Palpitation of the Heart, Noises in the Head and Ears, Impaired Sight and Memory, Indigestion, Pains in the Back, Headache, Piles, Constipation, Hysteria, Dizziness, Local Weakness, Muscular Relaxation, Nervous Irritability, Blushing, &c., resulting from Exhaustion of Nerve power, effect of Overwork, City Life, Worry, Brain Toll, Intemperance, and other abuses of the system.

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MANCHESTER.**E. KÖRTING'S PATENT
UNIVERSAL INJECTOR.**

Works equally well non-lifting or lifting.

Can be made to lift 24 feet.

Works with high or low steam-pressure.

Works with hot or cold water.

Forces the water in the boiler considerably above boiling point, thereby increasing the durability of the boiler.

Is started by simply turning one lever.

REFERENCES, TESTIMONIALS, AND PRICE LISTS ON APPLICATION



PARIS EXHIBITION, 1878.

GOLD AND SILVER MEDALS AWARDED for
Steam-Engines & Boilers, also the Special Steam Pump,
and Compound Pumping Engine.

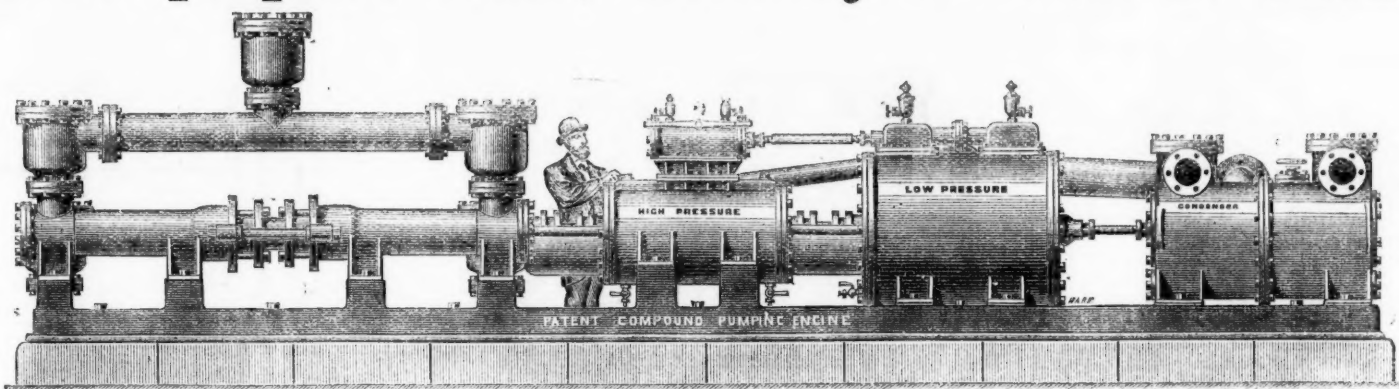


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CORNWALL HOUSE, 35, QUEEN VICTORIA STREET, LONDON, E.C.,
AND BIRMINGHAM, (TANGYE BROTHERS), CORNWALL WORKS, SOHO.

TANGYE'S DIRECT-ACTING
COMPOUND PUMPING ENGINE,

For use in Mines, Water Works, Sewage Works,
And all purposes where Economy of Fuel is essential.



TANGYE'S DIRECT-ACTING COMPOUND PUMPING ENGINE, WITH AIR-PUMP CONDENSER.

TANGYE'S COMPOUND PUMPING ENGINE COMBINES SIMPLICITY, CERTAINTY OF ACTION, GREAT ECONOMY
IN WORKING, COMPACTNESS, AND MODERATE FIRST COST.

This Engine will be found the most simple and economical appliance for Mine Draining, Town Water Supply, and General Purposes of Pumping ever introduced, and as regards Mine Draining, the first cost is very moderate compared with the method of raising water from great depths by a series of 40 or 50 fm. lifts. No costly engine-houses or massive foundations, no repetition of plunger lifts, ponderous connecting rods, or complication of pitwork, are required, while they allow a clear shaft for hauling purposes. In this Engine the economical advantages resulting from the expansion and condensation of steam are very simply and effectively obtained. The steam after leaving the high-pressure cylinder is received into and expanded in the low-pressure cylinder, and is thus used twice over before being exhausted into the condenser or atmosphere.

The following first-class Testimonials will bear evidence as to the efficiency and economy of the Engine:—

TESTIMONIALS OF TANGYE'S COMPOUND PUMPING ENGINE.

21' Newcastle and Gateshead Water Company, Newcastle-on-Tyne, Oct. 20, 1879
36 x 10" x 48" COMPOUND CONDENSING STEAM PUMPING ENGINE.
Messrs. Tangye Brothers.

GENTLEMEN,—In reply to your enquiry as to the efficiency of the two pairs of Compound Condensing Engines recently erected by you for this company at our Gateshead Pumping Station, I have great pleasure in informing you that they have far surpassed my expectations, being capable of pumping 50 per cent. more water than the quantity contracted for; and by a series of experiments I find they work as economically as any other engine of the compound type, and will compare favourably with any other class of pumping engine. By the simplicity of their arrangement and superior workmanship they require very little attendance and repairs, and the pumps are quite noiseless. A short time ago I had them tried upon air by suddenly shutting off the column, and found they did not run away, thus showing the perfect controlling or governing power of the Floyd's Improved Steam-moved Reversing Valve. I will thank you to forward the other two pairs you have in hand for our Benwell Pumping Station.

(Signed)

Yours respectfully,
JOHN R FORSTER, Engineer.

21' The Chesterfield and Boythorpe Colliery Company (Limited),
Registered Office, Boythorpe, near Chesterfield, Oct. 1, 1879.
36 x 12" x 48" DOUBLE RAM COMPOUND CONDENSING STEAM PUMPING ENGINES
Messrs. Tangye Brothers. Supplied in January, 1878.

GENTLEMEN,—Referring to the above, which we have now had working continuously night and day for the last 12 months, we are glad to say that it is giving us every satisfaction. It is fixed about 400 feet below the surface, the steam being taken down to it at pressure of 45 lbs. per square inch. We can work the pump without any difficulty at 28 strokes per minute=224 ft. piston speed. The pumping power is enormous. The vacuum in the condenser being from 11½ to 13 lbs. The pump is easily started, and works well and regularly. The amount of steam taken being much less than we anticipated. We consider the economy in working very satisfactory indeed. The desire for power and economy at the present day will certainly bring this pump into great requisition.

Yours truly,
(Signed)

M. STRAW, Manager.

SIZES AND PARTICULARS.

Diameter of High-pressure Cylinder.....In.	8	8	10	10	10	10	12	12	12	12	14	14	14	14
Ditto of Low-pressure Cylinder.....In.	14	14	18	18	18	18	21	21	21	21	24	24	24	24
Ditto of Water Cylinder.....In.	4	6	5	6	7	8	6	7	8	10	7	8	10	12
Length of stroke.....In.	24	24	24	24	24	24	24	24	24	24	36	36	36	36
Gallons per hour approximate.....	3900	6100	8800	6100	8800	12,000	15,650	8,800	12,000	15,650	24,450	12,000	15,650	24,450
Height in feet water can be raised with 40 lbs. pressure per square inch in } Non-condensing..	360	330	160	360	250	184	140	360	264	202	130	360	275	175
Ditto ditto ditto—with Holman's Condenser...	480	307	213	480	333	245	187	480	352	269	173	480	367	234
Ditto ditto ditto—with Air-pump Condenser...	600	384	267	600	417	306	335	600	440	337	216	600	459	203

CONTINUED.

Diameter of High-pressure Cylinder.....In.	16	16	16	16	18	18	18	18	21	21	21	24	24	24	30	30
Ditto of Low-pressure Cylinder.....In.	28	28	28	28	32	32	32	32	36	36	36	42	42	42	52	52
Ditto of Water Cylinder.....In.	8	10	12	14	8	10	12	14	10	12	14	10	12	14	12	14
Length of stroke.....In.	36	36	36	36	48	48	48	48	48	48	48	48	48	48	48	48
Gallons per hour approximate.....	15,650	24,450	35,225	47,950	13,650	24,450	35,225	47,950	24,450	35,225	47,950	24,450	35,225	47,950	35,225	47,950
Height in feet water can be raised with 40 lbs. pressure per square inch in } Non-condensing..	360	230	160	118	456	292	202	149	397	276	202	518	360	264	562	41
Ditto ditto ditto—with Holman's Condenser...	480	307	213	154	603	389	269	198	528	363	269	691	480	352	750	550
Ditto ditto ditto—with Air-pump Condenser...	600	384	267	191	750	486	337	248	600	450	337	864	600	440	937	689

PRICES GIVEN ON RECEIPT OF REQUIREMENTS.

Any number of these Engines can be placed side by side, to work in conjunction or separately as desired, thereby multiplying the work of one Pump to any extent.

NORTHERN DEPOT:—TANGYE BROTHERS, ST. NICHOLAS BUILDINGS NEWCASTLE-ON-TYNE.

THE GRAND PRIZE, THE TRIPLE AWARD.

Gold Medal, Silver Medal, and Honourable Mention awarded at the Paris Exhibition, in competition with all the World,
FOR MY LATEST PATENTED STONE BREAKERS AND ORE CRUSHERS.

HIGHEST AWARDS
FROM THE
MINING INSTITUTE
OF CORNWALL.

H. R. MARSDEN,

ORIGINAL PATENTEE AND SOLE MAKER OF BLAKE-MARSDEN

PULVERISERS,
B O N E M I L L S
MORTAR MILLS
&c. &c.

Improved Patent Stone Breakers & Ore Crushers.

New Patent Reversible Jaws,
in Sections with Patent
Faced Backs.

NEW PATENT ADJUSTABLE
TOGGLES.

OVER 2750 IN USE.

NEW PATENT WROUGHT-IRON CONNECTING
ROD.

New Patent Draw-back
Motion.

NEW PATENT STEEL TOGGLE BEARINGS.

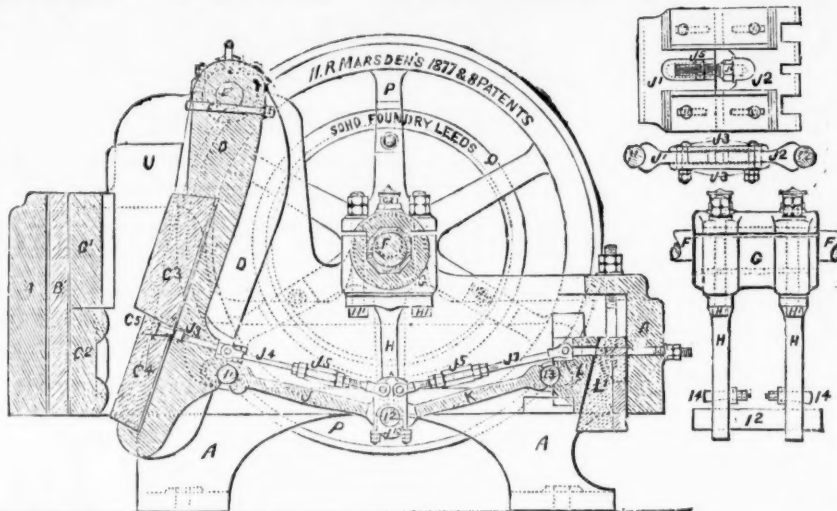
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PRIZE MEDALS.

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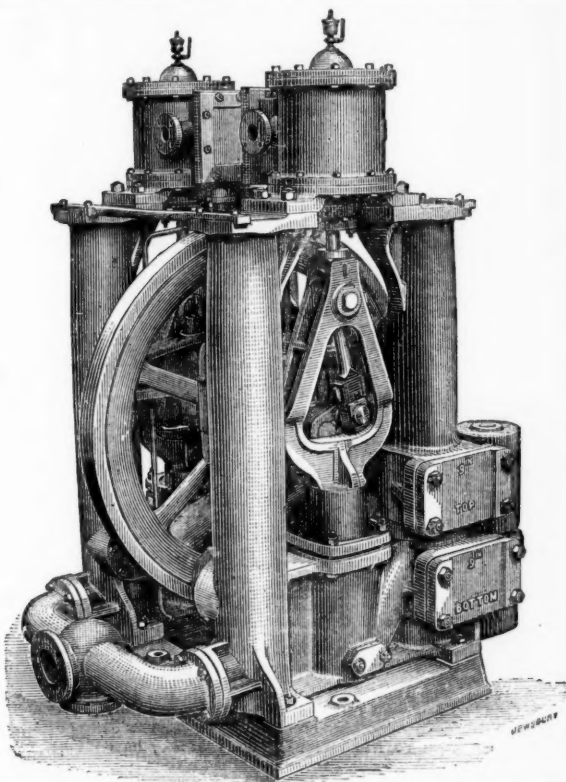
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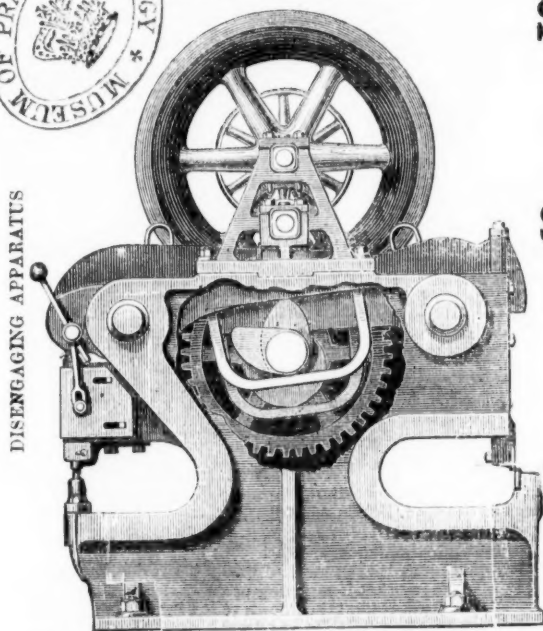
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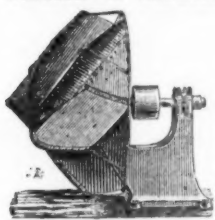
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